MARYLAND

FARMER AND MECHANIC:

DEVOTED TO

Agriculture, Horticulture, Rural Economy & Mechanic Arts.

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TO OUR FRIENDS.

Six months have now elapsed since the first number of the MARYLAND FARMER was issued, and now, at the beginning of the second half of the first volume, it may not be regarded as unbecoming in us to say a few words to our readers first of all; and next, to those who take a friendly interest in our labours. We think we may safely appeal to the numbers of the FARMER already issued in evidence of the fact that we have conscientiously fulfilled the pledges which we gave to our friends at the commencement of our enterprise. We know that many of our most prominent newspapers have been liberal of commendation, and from private sources we have the same testimony to the value of the suggestions we have had occasion to make, and of the extracts on rural affairs which we have carefully selected from other agricultural periodicals. We mention these matters here, and at this time, not with any view to self praise, but because we know that we have spared no efforts to make the FARMER of essential service to those to whom it is specially addressed. In this we hope and believe we have succeeded so far, and our trust is, that with the additional support of our friends, which we confidently look for in the near future, we may be enabled to do still better by extending our range and increasing the number of our illustrations.

We ask of those who are already subscribers to the FARMER, to help us in this matter. We know how easily they can direct the attention of their neighbours to the columns of the FARMER.

The first of July is an excellent time to subscribe, and we ask it as a favour, which we shall be happy at any time to have it in our power to reciprocate, that our friends and well-wishers—and we are glad to know they are many—will undertake to do whatever lies in their power to assist us in bringing the Farmer into more general circulation. Will they try? We are confident that to *try* is to succeed—and so we leave the matter in their hands.

HINTS ON COUNTRY HOUSES.

Number Seven.

In the construction of a country house, there are certain things which a long experience has taught us should invariably be taken into consideration.—It matters not what the class of house may be, its internal arrangements and external requirements—modified, of course, by the limited or ample means of the owner—are virtually the same. In the first place every house or cottage should have ample porches or verandahs. They may be simple or ornate; sturdy, or light and delicate architecturally; but they should be always regarded as essential adjuncts to a country dwelling. No one knows the real comfort to be derived from such structures unless he has lived in the country, as we have, for many years, and has fully tested the difference between a house with porches, and a house without any.—Porches or verandahs in the summer season are equivalent to extra rooms. They afford shade—when shade is most required. They protect the house from driving rains, and with trellises, covered with running vines and roses, they impart a beauty and a grace to the humblest home that is not to be attained in any other manner. In winter their great value is equally obvious. They shelter the house from the storms of the inclement season; they break, to some extent, the force of the wind that beats against it; they strengthen the house itself, and they afford the means of exercise when the condition of the roads and fields otherwise forbid it. We regard porches and verandahs as constituting an integral part of a dwelling in the country, so highly do we estimate their value. Nor need their construction create any uneasiness on the score of cost. We would not advise, neither would it be proper to do so, that porches for farm houses and that class of cottages which it is customary to build for the use of the country population, should be elaborately built. A stone foundation of rubble, built of the stones gathered from the adjacent fields, and ele

vated a foot or two above the surface. A stout frame work for the floor to rest upon, of timber hewn from the roads—chesnut or white oak being the most serviceable—a compactly laid floor of yellow pine—this, though costing most at first, being the cheapest in the end; pillars to uphold the roof, plain but strong; and rising, above all, a roof well shingled, and declining to a sufficient extent to carry the heaviest rains readily into ample gutters, which lead to spouts of dimensions to corresponding with the area covered by the rain-fall.—Another point—it is a false economy to plaster the ceilings of porches or verandahs. The heavy wind and rain storms that prevail with us at some seasons of the year, speedily loosen the plastering, and in the course of a short time it breaks off in great flakes. Any attempt to restore the ceiling to its original firmness and evenness of surface, will prove, as our own experience testifies, an entire failure. Instead of plastering the ceiling, either board it up with flooring boards, regularly fitted together; or use narrow slats, leaving between each slat a space—say of a quarter of an inch. The latter, when well done and painted of any neutral tint, corresponding with the body color of the house, yet of a darker shade, looks remarkably well, and has the further advantage of ventilating the space between the roof of the house and the ceiling.

We now turn to the house itself. The roof is the principal feature of a house. Let this be ever borne in mind, and it will then be understood how much advantage may be derived from the fact. We have always regarded the innovation introduced into American architecture by Downing—so far certainly, as respects the novelty with us, of projecting the roof from twelve to eighteen inches over the walls, and supporting it either with brackets or cantelivers, as one of the happiest that could be devised. A roof so drawn over alters, and for the better, the entire aspect of the house, and such an improvement in altering an old house or improving a new one, should never be omitted. The same may be said of the introduction of bracketed hoods for windows and doors; but we write of this with more reserve. If these hoods are so arranged as to require the use of inside shutters, we object to their introduction, except in special cases. We infinitely prefer the old fashioned venitian shutter, and we do not see why the use of these should not be combined with that of the hood—the latter affording to the house at certain seasons not only protection, but a partial shade. But the subject grows upon us, and we propose to continue it in our next.

Never allow weeds to bloom; it is the worst proof of thoughtlessness. One day devoted this year at the proper time will save a months application next.

ELEMENTS OF LANDSCAPE GARDENING.

Number Seven.

Sense of Fitness.---Decoration of Porches & Verandahs.

In all that is done for the improvement of the ground about the homestead, whether it be a farm house, a villa, or a simple cottage, the sense of fitness and due appreciation of the beautiful should combine. No one looks for the elaborate elegance and the perfection of dressed grounds on places occupied by persons of moderate means and who are engaged in maintaining their families by pursuits that are purely agricultural. Nor is it to be expected that cottagers, or those who retire into the country to economize their means, should attempt to rival their wealthier neighbours in the exquisite taste of their surroundings. What all may do, because it is what all can do, is to turn their skill to the decoration of the smaller or greater area surrounding the dwelling, having a due regard to the amount of labour required to produce the best effects, and at a cost within their means. In this too, as we have already remarked, the sense of fitness must be consulted, for the ornamentation of the grounds must ever accord with the character and style of the house, which is thus to be rendered more attractive, and which, after all, must constitute the central feature of the miniature landscape. This rule every improver will do well to bear constantly in mind, for neatness and picturesque effect, with humble materials, are in consonance with the moderate means of the owner, whilst excessive ornamentation about the humbler class of farm houses or cottages, however excellent in effect, with wealth and style to sustain it, would be as manifestly out of place around the less pretentious farm houses and cottages, as splendid apparel would be on the person of a plain country housewife. What then must be aimed at, is to adapt the means to that end, and above all, not to attempt too much. Everything, moreover, that is done should be done on a graduated scale. On large places, supported by adequate wealth, large well developed trees and plants of the rarest kind; bold drives; a multiplicity of walks and close shaven lawns. On small places, trees of lesser growth, and shrubs requiring for their culture lesser care, but, nevertheless, as intrinsically beautiful, as many of what are called the fairer and choicer species. On smaller areas, trees of a still more dwarfish character—and but few of them—resort being chiefly had to shrubs and evergreens, which, on a diminished scale, produce equally attractive effects. It is a great pity that whilst we can command so large a variety of flowering shrubs—shrubs, too, some of which will be found in bloom during the whole summer season—that so little use is made of them. They are singu-

larly lovely. When once properly planted they require comparatively little care and they add vividness to the picture they so exquisitely adorn. Next to shrubs when planted in groups on the lawn and flanking the approaches to the house, we heartily recommend a liberal use of running roses and flowering vines for the porches and verandahs. In the country, these are the natural and most appropriate ornaments of cottage and farm house alike. They clothe the dwelling and beautify it; they add a beauty even to the meanest cabin that nothing else can; they hide deformities; they dignify whilst they adorn, and being proper to the place and its surroundings are in perfect unison with that sense of fitness on which we have insisted so much. In choosing roses for this purpose, it is of much importance that the ever blooming varieties should be selected in preference to those that flower in June only, although the latter have some qualities which in a rosary or on the open lawn, it is very desirable to retain. But the Tea and Bourbon roses bloom so freely, and with the protection of a little straw about their roots, are sufficiently hardy to stand well our winters in this latitude, and many of them are so fragrant, that they are by all means to be preferred. The choice is infinite; and although the selection to be made is altogether a matter of taste, we propose in a succeeding number to give a list of the best varieties—both of roses and vines—leaving it to the improver to pick out those which are most suitable, in his opinion, to the uses to which he intends to apply them. As for vines, as a general rule, none but those that are perennial should be planted about the porches and verandahs. The annual climbers, though very pretty and some of them of quite rapid growth, rarely form a dense mass of foliage until July or August, and for this reason should be sparingly used. The Clematis, white and purple; the Jasmine, white and yellow—the latter, however, is quite tender and requiring much winter care. The Chinese evergreen honeysuckle; the Dutch monthly and the coral, and the two varieties of Wistaria, the Chinese and the American—these are our favorites for ordinary use, but there are others of which we shall speak more at large hereafter.

The Valleys and Villages of Baltimore County.

From the Baltimore County *Advocate*, we extract the following from a highly interesting article recently published in its columns:—

"No county in the State, probably has such a diversity of soil and scenery as Baltimore county. Starting with the sandy meadows adjacent to the bay, and going northward, we have a succession of rolling tracts, broken by abrupt ridges with fertile valleys intervening. Throughout its entire extent, the County is well provided with timber suitable for fuel, fencing and building and the manufacture of machines. Springs and streams of water everywhere abundant, supplying ample power for carrying on any of the mechanical operations peculiar to our country. Owing to the elevation of the upper part of the County, the streams are generally rapid, with considerable fall, thus giving them greater mechanical power.

"Baltimore county has now thirteen paper mills within its limits, several iron establishments, a large number of grist, merchant and saw mills, a number of cotton factories, with many other establishments, chiefly driven by water power. And when our manufacturing advantages become fully known, we hope to hear the busy rattle of machinery and the steady plash of the water wheel, where now the the streams roll along in an unbroken current.

"Most of our readers have heard of the justly celebrated Dulaney's Valley. From its peculiar shape we should call it a basin rather than a valley. Taking a position in the centre, a line of three or four miles in length would reach to its utmost side. It has within its bounds a fine mill stream, inexhaustible quarries of limestone, considerable timber, and good roads. On entering the valley from Towsontown, we have often felt the influence of its quiet beauty; looking down to where the Gunpowder marks its northeastern limit, and the hills on either side are lost in the blue horizon beyond. On the right are Epsom, the residence of Mr. Chew, the fine old mansion of the Ridgely estate with its elegant surroundings, and farther down. Glen Ellen, the residence of Mr. Gilmor. On the other side are a number of fine farms with less pretensions, though perhaps no less comfortable, mansions. But one thing is wanting to develop the beauty and fertility of Dulaney's Valley—*smaller farms*. We believe that the great difficulty which farmers in this part of the State have to contend against, is the unmanageable size of their farms. Successful farming, like everything else, requires a concentration of effort. The man who runs his ploughs hurriedly and scatters his fertilizers thinly over 200 acres, may boast larger fields; but his neighbor, who puts the same amount of work and the same amount of manure on 100 acres, will always boast larger crops, and more money in his till at the end of the year.—* * * The fencing, fertilizing, &c., of a large farm eat up all the profits, and nothing is left for improving the buildings, making the family mansion comfortable and attractive, and filling it with good and useful reading matter. * * * Give Dulaney's Valley three farms where it now has one, and in five years its fences will be better, its buildings more attractive and comfortable, its soil richer and far more valuable, and its beauty increased a hundred fold. * * *

We lately had the pleasure of enjoying the hospitality of Mr. Alexander M. Morrison and his estimable lady, living at Sweet Air. * * * It is expected that the work of extending the Dulaney's Valley Turnpike to Sweet Air will be undertaken at once. When this is completed, it will bring that place in close connection with Towsontown, and thence by railroad to Baltimore, and will prove of immense advantage to the surrounding country.

Leaving Sweet Air, we drove down through the Long Green Valley. This is by far the most fertile and attractive section of country we have yet seen in Baltimore county. Its broad acres, bending under the weight of growing crops, show how thoroughly and successfully it is cultivated, while its elegant buildings prove alike the wealth and good taste of its inhabitants."

Our Agricultural Calendar.

Farm Work for July.

We have very few remarks to make in regard to farming operations during this month, beyond the suggestions we make, as usual, in our customary calendar. Everybody knows that July brings with it a more than ordinary amount of field labour, and in the existing scarcity of hands and the backwardness of the corn crop, the energies of our country friends will be taxed to the utmost. Fortunately with us, the harvest season usually occurs during a period of almost continuous dry weather, and we are consequently enabled to get in the crops in good condition, even when subjected to unavoidable delays. But, although we thus avoid a serious risk, to which the people of England and Northern Germany are constantly subjected, we should, nevertheless, push matters so rapidly forward, that the grain may be cut when it is in its best state, and the grass housed in its best condition. There is, moreover, at this time, the still further necessity for getting through the harvest as quickly as possible, and that necessity arises from the backwardness of the corn crop, which will need constant working for some weeks yet to come. We have spoken below of the great advantage to be derived from making up for the deficiency of field labour by a more general use of labour-saving machinery, and we sincerely trust that our friends will profit by the suggestion :—

HARVESTING WHEAT.

The important season of the wheat harvest takes place in the Middle States on or about the 4th of July. It is of the utmost consequence that the work should be done in good time, but the scarcity of hands is, at present, so great, that resort must be had on all large farms to those labour-saving implements which facilitate the work of cutting and saving the grain. There never was a period before in the history of the country in which reaping and mowing machines, with their self-acting appliances, were so useful or so imperatively needed as at present. We therefore, in all sincerity, and in the interest of our agriculturists generally, suggest their extended use as a measure of economy, and as the only means, in many cases, by which large crops can judiciously and inexpensively be saved.

Time of Reaping the Grain.—The proper time for harvesting wheat is while the grain is yet in soft and plastic condition and the straw for three or four inches below the ear has turned yellow. Wheat should never be permitted to stand in the field until it is dead ripe, as the ear becomes brittle and the grain shatter readily, and moreover, the grain under such circumstances, loses sensibly in plumpness and weight. Grain cut when in a state of stiff dough, is thinner skinned, more nutritive, and makes a better quality of flour, and for these reasons it should be harvested early.

CULTIVATION OF CORN.

In consequence of the backwardness of the season it will be manifestly impossible to desist from working the corn during the wheat harvest. The cultivator and shovel plough should therefore be freely and constantly used, and no pains should be spared to keep the corn in a vigorous growing condition. It is indeed by the amount of labour bestowed upon corn during the middle stages of its growth, that the hopes of a full crop may be estimated whenever the soil is in good heart. There has been a great deal said concerning flat culture, as contradistinguished from the old system of ridging, and both have their advocates. There are, moreover, good arguments to be brought forward in favour of both systems. The sum of the matter being this—that corn succeeds best on level lands when cultivated so as to maintain a level surface, and also best on slopes and hill sides when ridged up, provided the ridges run horizontally across the slopes so as to retain the rain water, and not perpendicularly to them whereby the water would be rapidly thrown off and deep gullies cut in the hillsides. Constant tillage, a loose deep soil, and perfect freedom from weeds—these are the only conditions under which corn will flourish, and the product return the largest amount of profit to the producer.

HAY HARVEST.

All grasses should be cut soon after they come into bloom, as the hay is more nutritive and the exhaustion of the ground is less than when the plants are allowed to go to seed. In regard to clover the proper time of cutting is when about half the heads are turned brown. In curing clover it should be exposed as little as possible to the action of the sun and rain, as in the first case the leaves shrivel and drop off, and in the last the whole crop is blackened and its aroma destroyed. Cure clover, therefore, in winrows—carefully turning them until they are dry enough to put into cocks. Enlarge the size of the cocks by degrees, by throwing two or three of them together and haul in as early as it is prudent to do so.

MILLET.

The seed of this grain may still be sown up to the 10th of this month For further directions see Farm work in our preceding number.

FALL POTATOES.

Earth these well up. Keep the ground loose and light in the intervals between the rows. Keep the crest of the ridges flat, to retain the rain water as much as possible, and cut out all weeds as they appear.

SHEEP.

From this time until the autumn a trough should be kept under cover in the sheep pasture, the bottom of which should be covered with tar, and over the tan salt should be sprinkled every few days. The object of this is to furnish the sheep with the necessary supply of salt, and also at the same time by smearing their noses with tar to prevent the fly, which prevails at this season of the year, from depositing its eggs on the nostrils of the sheep, and thus breeding what is styled worms in the head.—The plan is a very simple one, and if it is properly carried out, will prove quite effectual as a preventive against this disease.

FALL TURNIPS.

Make all the necessary preparations for putting in a crop of turnips to mature in the fall. The crop should not be seeded until the first week in August, but in the meantime the ground should be put in the best possible condition; and if the drill system is adopted, the manure should be hauled out and deposited in the drills and covered over, ready for the reception of the seed. The crown of the drills should be flattened either with a roller or the back of a rake before the seed is sown. If the seed is to be broadcasted, plough the manure under and harrow and cross-harrow until the soil is well pulverized.

Kinds and Quantities of Manure.—Where the soil is not rich enough to bring a good crop of turnips, either of the following fertilizers will be sufficient for an acre:

1st—15 loads of well rotted horse or cow manure.

2d—1 cwt. of Peruvian Guano, 5 bushels of bone dust, 10 bushels of wood ashes; mix and spread either in drills or broadcast.

3d—250 lbs of Phosphatic Guano, 1 bushel of plaster and 2 bushels of refuse salt.

Quantity of Seed to the Acre.—1 lb. of turnip seed mixed with twice its bulk of sand, will be sufficient for an acre, but it is advisable to seed an additional ½ lb. to compensate for the ravages of the fly.

After Culture.—When the plants first make their appearance, dust them of a morning while the dew is on them, with a mixture composed of equal parts of ashes, plaster, soot and salt. Continue this dusting until the plants get into the rough leaf when they will be comparatively safe from the fly. As soon as the plants begin to spread their leaves, thin them out so as to stand from 6 to 8 inches apart.—Hoe them well, if broadcast, and use the hoe and cultivator if drilled in. Keep the soil light and the ground free of weeds, and a heavy crop may reasonably be calculated on.

CATERPILLARS.

Examine all the fruit trees and pick off and burn or otherwise destroy, whatever caterpillar's nests may be found on them.

PEARS, PLUM AND CHERRY TREES.

If the black knot appears on the limbs of these trees, cut off all such branches and burn them.

BUDDING AND INOCULATING.

Plums, cherries, apricots and pears may be budded or inoculated during this month, but more especially towards the end of it.

RUTA BAGA.

Ruta Baga turnips should be seeded early during this month; for the preparation of the soil and its after culture see the directions for turnips as given above.

ROOT CROPS.

All the various kinds of root crops now require attention. They should be kept well cultivated, the soil being frequently stirred and entirely divested of weeds.

COMPOST HEAPS.

Seize every available opportunity to collect refuse material for making compost heaps.

WET LANDS.

During the dry season which is now at hand, the draining of wet lands may be pushed forward with great advantage, and, if possible, every advantage should be taken of this opportunity.

Garden Work for July.

The work to be done in the garden during this month is as follows:

Cleaning off the Beds.—Clear off all beds from which the earlier growth of vegetables has been withdrawn; throw the refuse matter into the barn-yard or hog-pen—manure the ground anew, and put it in order to receive such other crops as may yet be seeded, or such other plants as may yet be set out for winter use.

Melons for Mangoes.—In the first ten days of the month prepare a bed and plant melon seed for mangoes.

Cucumbers for Pickles.—Prepare a bed and sow cucumbers seed for pickles.

Planting out Cabbage Plants.—Manure very liberally and with the richest and best rotted barn yard manure, a sufficient space for late varieties of cabbage. Dig the ground a full spade deep, rake it finely and set out after the first rain the choicest kinds of winter cabbage, not forgetting to include the Savoy's among them. Set out also Borecole and Brocoli plants, and be careful to water them every evening after sunset until they begin to take root and grow. Work them well during seasons of drought, and water them at least three times a week with the diluted drainage of the barn-yard, or soap suds.

Endives.—Set out your endive plants and sow endive seed every ten days during the month, for later crops.

Dwarf Beans.—Dwarf beans may still be planted at intervals of ten days, during the whole of this month. The seed should be soaked in tepid water for five or six hours before planting. Choose a cool border, if it is available, and water the drills frequently of an evening, after sunset, until the plants break through the surface. Should the weather still remain dry, water frequently of an evening until rain occurs.

Cauliflower.—Take occasion of the first moist day to set out cauliflower plants. Treat them subsequently as recommended for cabbage.

Small Salading.—Small salading of all kinds should be seeded at intervals of a week throughout the month for succession.

Celery.—Set out celery plants for the main crop.

Turnips.—Prepare a bed for turnips and seed it during the last week of the month, or the beginning of the month following.

Ruta Bagas.—See Farm Work, and follow the directions there given.

Lettuce.—Set out lettuce plants to head. Water freely of an evening after sunset until rain occurs, and sow fresh seed at intervals of ten days.

Spinach.—About the middle of the month prepare a bed and sow spinach seed for autumn use.

Radishes.—Sow radish seed every week throughout the month.

Leeks.—Set out leeks.

Herbs.—Gather pot and medicinal herbs and dry them in the shade in some well aired room.

Propagation of Herbs.—Sage, Thyme, Lavender, Hyssop, Winter Savory, and also all the other herbs properly so called, may still be propagated from slips of this year's growth. Water the slips freely when first set out, and continue to do so until the slips take root.

Green Peas.—A few rows of garden peas may still be seeded in a shady situation, taking care to give the drills a copious watering at the time of seeding, and watering freely when the plants come up.

General Management of the Garden.—See that the soil is kept loose about the plants, and the beds free of weeds. Water liberally, and invariably after sunset during the prevalence of dry weather.

Paper from Sorghum Stalks.—A new paper-mill has just gone into successful operation at Perrysburg, Wood county, O. It is at present making wrapping paper exclusively. For this purpose it works up sorghum stalks, which make an article resembling straw paper, but much stronger and superior. The demand is so much greater than the supply for this paper that the works are to be extended and the manufacture of printing paper commenced.

AGRICULTURAL CHEMISTRY.

When a man buys clean copies of Liebig and of Boussingault, and walks into possession of his property with the books under his arm, and an assured conviction that with their aid, he is about to supplant altogether the old practice, and commit havoc with old theories, and raise stupendous crops, and drive all his old-fashioned neighbors to the wall—he is laboring under a mistake. His calves will very likely take the "scours;" the cut-worms will slice off his phosphated corn; the Irish maid will pound his cream into frothy powder—in which events he will probably lose his temper; or, if a cool man, will retire under a tree, and read a fresh chapter out of Liebig.

There are a great many contingencies about farming, which chemistry does not discover, and probably never will. People talk of agricultural chemistry as if it were a special chemistry for the farmer's advantage. The truth is, (and it was well set forth, I remember, in a lecture of Professor Johnson's) there is no such thing as agricultural chemistry; and the term is not only a misnomer, but misleads egregiously. There is no more a chemistry of agriculture than there is a chemistry of horse-flesh, or a conchology of egg-shells. Chemistry concerns all organic or inorganic matters; and, if you have any of these about your barn-yards, it concerns them; it tells you—if your observation and experience can't determine—what they are. Of course it may be an aid to agriculture; and so are wet weather, and a good hoe, and grub, and common sense, and industry. It may explain things you would not otherwise understand; it may correct errors of treatment; it may protect you from harpies who vend patent manures—not because it is agricultural chemistry; but, I should say rather, looking to a good deal of farm practice—because it is not agricultural, and because it deals in certainties, and not plausibilities. There is such a thing as religion, and it helps, sometimes, to purify Democrats and sometimes Republicans; but who thinks of talking, unless his head is turned—about Democratic religion or Republican Christianity?

The error of the thing works ill, as all errors do in the end. It indoctrinates weak cultivators with the belief that the truths they find set down in agricultural chemistries, are agricultural truths, as well as chemical truths; and thereupon they mount a promising one as a hobby, and go riding to the wall. Chemistry is an exact science, and Agriculture is an experimental art, and always will be, until rains stop, and bread grows full-baked. A chemical truth is a truth for all the world and ages to come; and if you can use it in the making of shoe blacking, or to dye your whiskers, do so; but don't for that reason call it whisker chemistry.

It is a chemical truth that an alkali will neutralize an acid if you furnish enough of it; and if, with that truth festering in your brain, you can contrive to neutralize your entire fund of oxalic acid, so that no sorrel shall thenceforth grow—pray do so. But I do not think you can; and first, because the soil—to which quarter you would very naturally direct your alkaline attack—may be utterly free of any oxalic acid whatever; its presence in the plant is no evidence of its presence in the soil. Pears have a modicum of pectic acid at a certain stage of their ripeness, but I suspect it would puzzle a sharp chemist to detect any in the soil of a pear orchard. And even if the acid were a mineral acid, and were neutralized—it must be remembered—that to neutralize is only to establish change of condition, and not to destroy; how know you that the little fibrous rootlets will not presently be laying their fine mouths to the neutral base, and by a subtle alchemy of their own, work out such restoration as shall mock at your efforts—in all their rampant green, and their red tassels of bloom?

The presence of any particular substance in a crop does not *ipso facto* warrant the application of the same substance to the soil as the condition of increased vigor. The man who, having retired to the shade for a fresh chapter of Liebig, finds that cellulose enters largely into the structure of his plants, and thereupon gives his crops a dressing of clean pine saw-dust, would very likely have his labor for his pains. That wonderful laboratory of the plant has its own way of effecting combinations; and stealing, as it does, the elements of its needed celloluse in every laughing toss of its leaves—it scorns your offering.

It is a chemical truth that the starch in potatoes or wheat, is the same thing with the woody fibre of a tree; but it is not an agricultural fact—differs as widely from it, in short, as a stiffened shirt collar from the main-mast of a three-decker ship. A farmer comes to the chemist with some dust or bolus from a far-away place, and asks what is in it; he can tell upon examination, and if, after such examination, he finds it to possess a large percentage of soluble phosphoric acid, he will advise its use as a manure, and can promise that it will contribute largely to the vigor of a wheat crop; all this—not simply because phosphoric acid is a constituent part of the grain, but because he knows that other dressings containing a like element have invariably so contributed; the fact being established by repeated farm-trials. But it is not a result determinable, unless you could establish the crop and feed it, under those conditions of alienation from all other influences, by which, or under which alone, the chemist is enabled to establish the severity of his conclusions.

The power of the chemist to decompose, to unravel, to tear in pieces, and to name and classify every separate part, is something wonderful; but his power to combine is less miraculous. Give him all the carbonic acid in the world and he can not make us a diamond, or a lump of charcoal. And when, with the natural combination is associated a vital principle, (as in plants,) controlling, amplifying, decomposing at its will, his power shrinks into smaller dimensions. Faithful and long-continned observation of the mysterious processes of nature, will alone justify a theory of plant nutrition. A large part of this observation is supplied by the history of farm experiences, and another part is supplied by the earnest investigations of special scientific inquirers. Where the two tally and sustain each other, one may be sure of standing upon safe ground. But where they are antagonistic, one has need to weigh conflicting evidence well, not presuming hastily that either practical experience, or a special science has, as yet, a monopoly of all the truths which lie at the base of the "mystery of husbandry." For these reasons it is that I say—let no man rashly hope to revolutionize farming, upon the strength of clean copies of Liebig and Boussingault.—*My Farm of Edgewood.*

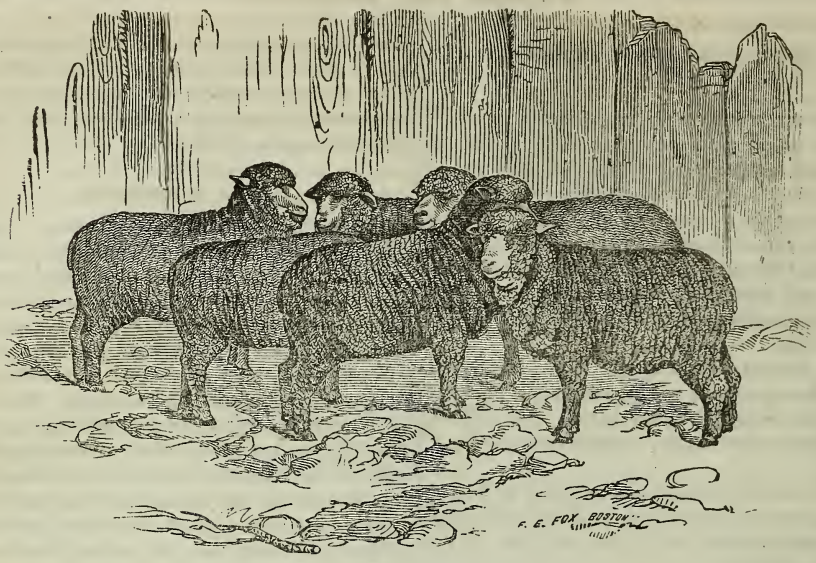
The Culture of Ruta Bagas.

Like the parsnip, the Ruta Baga is not cultivated by our farmers to the extent it ought to be, though much more generally than the former. It is not nearly so difficult of cultivation as the parsnip, though it also requires care and high farming to render certain large crops. We have heard of 1200 bushels being raised upon an acre, and we have viewed crops which yielded about 800 bushels.

The seed should be sown not later than the 25th, or at farthest the 28th of July, though some farmers sow it much earlier. About the middle to the 20th of July is perhaps the best period for this latitude. If the soil is mellow and rich, the Ruta Baga will grow anywhere. It is, like the parsnip, a very hardy plant, and can be allowed to remain in the ground until late in November.

Sow the seed in drills twenty-eight or thirty inches apart, and when the plants are well up, thin out to about eight or ten inches, then cultivate between the rows and hoe or use the hand to remove the weeds between the plants. Cleanly cultivation is very important in this crop. It will take about one pound of seed per acre.

The ruta baga buried in pits, or stored in barn-cellars, keeps in excellent condition through the winter, and will be found to promote vastly the health of cattle and the productiveness of the dairy, long after pasture has disappeared, and when hay may have become short or poor.—*Ger. Tel.*



GROUP OF MERINOES.

Spanish Merinos.

"The history of this celebrated race of sheep, so far as it is known, has so often been brought before the public that it is deemed unnecessary here to recapitulate it. The first importation of them into the United States took place in 1801. Four were shipped by Mr. Delessert, a banker of Paris, three of which perished on the passage. The fourth arrived in safety at Rosendale, a farm owned by that gentleman near Kingston, in Massach. The same year Mr. Seth Adams, of Mass., imported a pair from France. In 1802, two pairs were sent from France by Mr. Livingston, the American Minister, to his estate on the Hudson; and later the same year, Mr. Humphreys, our Spanish Minister, shipped two hundred, on his departure from that country, for the United States." Hon. Wm. Jarvis, of Weathersfield, Vermont, then American Consul at Lisbon, sent home large and valuable flocks in 1809, 1810, and 1811. The Merinos "attracted little notice, until our difficulties with England led to a cessation of commercial intercourse with that power, in 1808 and 1809. The attention of the country being then directed toward manufacturing and wool-growing, the Merino rose into importance. So great, indeed, was the interest excited, that from a thousand to fourteen hundred dollars a head was paid for them."

The small white sago, called the pearl sago, is the best. The large brown kind has an earthy taste.—This article and tapioca, ground rice, etc., should be kept covered.

THE BEST WHITEWASH.

Mr. Uriah Ritchie, well known in Boston as a master-builder, and one of the owners of the immense building in New York in which are located the offices of the SCIENTIFIC AMERICAN establishment, gives to us the following recipe for whitewashing. Mr. Ritchie is a practical and successful mechanic in the broadest sense, and after forty years' experience at mason-work, and after having made a great many experiments in the art of preparing whitewashes, he comes to the following conclusions:

First—For rough outside walls—those exposed to the weather—the best mixture is clear lime and water. Any animal or vegetable substance added diminishes the adhesion and durability of the wash.

Second—But if the wall is hard and smooth, the wash is improved by a mixture of very fine sand—as much as will mix and can be applied.

Third—For inside walls an addition of a little glue—say a quarter of a pound to 3 pailfuls—increases the adhesion. If it is desired to have the walls very white, the whites of eggs may be used in the place of the glue.—*Scientific American.*

COVERED MANURES.—A late number of the Journal of Agriculture, contains a statement of the result of an experiment made to determine the relative value of manure made under cover, and that exposed in the barn-yard. Both manures were applied to potatoes in equal quantities. The yield on equal portions of land was as follows: Manure from barn-yard, 252 bushels per acre; manure made under cover, 297 bushels per acre.

HAY MAKING.

There is something beautiful, says a writer, in the operation of making hay when the weather suits.—This is so with Timothy, with all kinds of grass, especially so with clover. Cut it when in blossom, when stem and head are tender, and juicy and fragrant. The scythe—if you are so unmannerly as to cling to the old poetic usage—will "walk" through with the greatest ease, showing what a tender thing you have. It is precious and requires careful handling. Let the sun wilt it; though it would be better if the sun did not see it at all. His rays are too fierce, and will scorch it and hurt it. Better if in the old fashioned winrow, than spread with the machine. If mowed with the machine, and there is time, put it in winrows, broad and somewhat thin, so that the air can get in. This will measurably relieve it from the sun. Then, if there is warm, dry air stirring, a few hours will sufficiently wilt the grass to fit it for the cock. It should always be cut when the dew is off. Then throw it in small cocks, say of half a hundred weight to the cock. Consult your barometer, and if your sure of your weather, leave your cocks untouched for about three days or nearly that. Then, if your weather is warm with a little air in motion, let a hand precede the wagon, and turn over the cocks, loosening up the hay a little. This, with the stir the hay will get in loading and unloading, will be sufficient. And now you have hay that is hay—green, with a slight touch of amber. You have every head entire not falling into chaff. Every leaflet is there tenacious of its stalk; the entire stem as the scythe left it, is there—pliable, not brittle and dried to a crisp, with the heads and leaves missing, or lodged on the barn floor, in the mow-seat, in your neck and bosom, and scattered on the field. But here you have heads with the hue of the blossom still there—a flower "pressed" —that is making hay. In this—"pressing your flower"—is the whole secret. Wilt and cure, but not dry. *Cure* is the only word. If the weather should continue wet beyond the time allotted for its cure, in with it the first moment it is dried off on the outside. Your hay is cured; but there is still some moisture left; and you have no means to give this to the air, so sprinkle a little salt on each load, amount according to moisture. Your hay, when fed, comes out about the same; is as readily taken by the stock. Even should it change a little in the mow, how much better so than a bulk of brittle sticks, with all the sugar and the starch out, and all substance. Such "hay" will starve cattle, and is a pity to look at. There is no peotry in such "hay," neither in the making of it, nor the feeding. There is less labor in making it the right way; and the wettest season will not spoil it, as in the other case. Such hay—or grass cured—will fatten your stock. It will have the summer effect upon your cattle, upon the bowels. They will eat it with avidity, and brighten up over it. Roots may be dispensed with in the presence of such hay. 'Tis thus one may have summer with his cattle. Such a man is benevolent, as well as an economical and wise man. The sight of such hay shows the prosperity of a man.

Why Seeds Fail---Practical Hints.

Frequent failures are made in cultivation which are unjustly charged to seedsmen. Seeds are sown, they do not come up, and they are set down as old and imperfect. While such seeds are doubtless sold by some, our experience is that respectable seedsmen generally send out reliable seeds, and that the want of success is oftener the fault of the sower. Seeds after being sown differ as to the power of resisting decay, if the circumstances are unfavorable to their immediate germination.

Three conditions are necessary to the growth of all seeds, viz: air, moisture, and a sufficient temperature. Any one of these failing the seeds will not grow. The amount of heat required for germination varies greatly with different seeds; those of the common chickweed will start at a temperature just above freezing, while those of some tropical plants require 75° or 80°. The seeds of the plants commonly cultivated germinate at a temperature of 50° to 60°. Moisture is required not only to soften the seed coat, but to enable the germ to grow, and too much or too little is equally fatal to success. If the soil is too dry the seeds remain unchanged; and if an excess of moisture is present, the seeds, if delicate, will decay. In well drained soils the proper amount of water is held by capillary attraction. The third requisite, air, is always present in recently worked soil.

All the conditions being favorable, there is a great difference in the time that seeds require for germination. Placed under similar circumstances, it has been found that wheat and millet germinate in one day, beans, radishes and turnips two, and lettuce in four days, while melons and cucumbers require five or six, and parsley thirty or forty days. The seeds of some trees and shrubs remain in the ground one and even two years before they germinate.

The common causes of failure with good seeds are; too deep or too early sowing, and excess of moisture. When small seeds are planted too deeply, the vitality of the germ is exhausted before it can reach the light and air necessary to its growth: such seeds should be barely covered with soil, and if there is any danger of the surface becoming too

dry, it should be shaded. Very small seeds may be sprinkled on nicely prepared soil, and then lay a board on the surface until they start. When sowing is done to early, the ground is too cold, and many seeds rot before it becomes of a proper temperature to cause germination. Too much moisture in the soil excludes the necessary air, and thus one of the requisites being wanting, the seeds decay.

Salt as a Manure.

The importance of salt as a manure is a matter of practical interest to cultivators of the soil, and the Liverpool Chamber of Commerce having recently employed Dr. Phipson to report upon the question, we print the conclusion to which he comes. They, are "1. That without a due proportion of salt plants cannot attain their proper degree of perfection; and this applies especially to colze, turnips, swedes, beet, spinach, wheat, oats, maize and other grasses. 2. That salt is an essential constituent of plants as well as animals. 3. That the soil is losing by cultivation a great amount of salt, taken away by the crops.— 4. That none of the manures at present used (except a very few of the best superphosphates) contain any salt; even guano containing only four-tenths per cent. 5. That it is necessary to add salt at regular intervals to the soil, in some shape or other, if we wish to derive the greatest possible benefit from our crops."

Mowing Machines.—The Massachusetts *Ploughman* says:—"Let every neighborhood start early and get at least one Mowing Machine. They can perhaps save their entire cost in a single season.— Let every *large* farmer get a horse pitch-fork. That, also, will pay for itself in a single year. Make up your mind to work harder and make longer days this season than usually, and compensate in part by a more generous "feed" for yourself and your beasts. So arrange your work that a rainy day shall not throw you out of employment. First and last and always, keep up a continual "thinking," and studying how to make your labor count to the greatest advantage in the production of crops. Crops are what we want—this year more than ever before—therefore let each one of our farmer readers try to get the largest possible crops for the amount of labor bestowed."

That. is good advice, especially these times of scarcity of farm help.

Nitrate of Soda.—It is said that watering strawberries with water in which *nitrate of soda* has been dissolved, to the amount of one ounce of soda to a gallon of water, will help the plants to produce a wonderful crop.

THE CORK.

There are few things in common daily and manifold use, of which so little is known as cork. Some think it is a kind of bark and grows in the woods, others that it grows under water like the sponge, and we have even heard the belief expressed, that cork grew on trees like plums and pears. It is an article indispensable to every household—is used in cellar and kitchen, and found in every sick room; druggists, chemists and liquor-dealers consume great quantities; it is used by nearly all mechanics, forms part of the manufacture of various articles of clothing, such as hats and shoes for winter; lastly fishermen use it for their seines, and it preserves our lives when in danger on the water. Does not such an useful, so versatile an article, which has no substitute, nor ever will have, deserve to be known better?

The cork tree, or cork oak, *quercus suber*, belongs in botany to the same class as the rest of the oaks, bears acorns, and only differs from them by giving less shade and looking less fresh, owing to its bark being clipped so often. The bark is the cork wood, and out of it corks are cut. It was known and made use of by the old Greeks and Romans. * *

This wonderful tree only grows in Europe, in Spain, Portugal and Sicily, and to some extent in parts of Southern France, and also in Africa near Bone, Algiers. All efforts to transplant it to our country to parts of the same geographical and terrestrial condition, have proved futile. It has an accommodating way of growing best and producing the finest cork in the most sterile ground. So it is seen in the Pyrennees on the top of mountains, between nothing but rocks and stones. The acorn is planted, and after the sapling has grown into a tree of about five inches diameter, say after ten years more or less, it is for the first time stripped of its bark, but not more than two feet from the ground. The stuff obtained is good for nothing and is called "the savage." After another eight or ten years it is stripped again, and this time double the former length from the root, and so successively until forty years of age, when it is stripped from the root to where the branches begin to expand, where the bark is always of the finest qualities hereafter. The second growth is little better than the first, it is used for seines and other rough purposes, but the third commences to be good. For this reason so little is planted, as it takes nearly fifty years before the tree yields a full crop, but once in operation the tree lasts centuries. It is the greatest dividend-paying property on earth, as it wants no looking after, no nursing, only to be clipped every ten years. The cork is stripped to what is called "la camisa," the shirt of the tree, a tender sort of second bark, which is blood-red, and if slit open, or partly cut, causes

the whole tree to die off. This red color lasts about ten months, after which, exposure and the growth within thicken and strengthen the bark, and after a year or two it assumes a rough and furrowed grey-brown appearance. The crop is made on an average every ten years, the bark growing in thickness less every year, and after it is stripped, the thickness plainly indicates the age, by fire lines, running parallel with each other, a line to each year. The space between the outer bark and the first line is often a quarter of an inch wide, as the first year knows of no impediment or pressure, and thus the bark grows most: the space between the next years is smaller, and so on up to the last, which, if the bark is between twelve and fifteen years old, dwindles down to a line. In fertile bottoms or plains, the bark is often fit to be stripped after five or six years, is thicker than the one raised on the mountains of double age, but the quality is very inferior. The best cork wood grows in Cataluna, Spain, in the Province of Gerona, and it is at present, almost exclusively from any other wood, used for champagne corks, and the preference given to it in that quarter ought to be decisive.—*Otto Kapp.*

AGRICULTURAL MACHINERY.

We have always been an advocate for the use of all labor saving machinery upon the farm. We are more so now than ever, for the scarcity of farm labor is such, and the need of increased farm products so great, that any thing which will save the labor of the hands, or enable the horse or the ox to do profitably more productive labor than before, is of the utmost importance at this time. Strictly speaking, every agricultural implement, from the hoe to the reaping machine, is a machine. And yet there are, even at this time, many farmers who will start at the word "machine," and tell you they want no machine work on their farm. We have seen a good deal of this stupid prejudice at work, and marked how stubbornly and sullenly it gave way to any improvement, however obvious it might be, and finally come into the adoption of it, though at a late hour, and with a rather bad grace.

We remember, though then a little boy, when Samuel Adams of Kingston, Mass., obtained a patent for a reaping machine, the first of the kind ever invented in America, if not in the world. He was far ahead of the times, and as he hadn't capital enough to put it into public use, and the farmers hadn't faith enough to help him, he obtained nothing but ridicule for his invention, and reproach for spending his time in such visionary schemes.

At a still later day, we saw pretty much the same results attend the labors of our worthy old friend, the late Ezra Whitman, senior, of Winthrop, in his endeavors to introduce a reaping machine. But how is it now? Reaping machines and mowing machines are considered great and blessed institutions, but to our certain knowledge, they are based and work on the very same principles as those of Adams' and Whitman's inventions, and which *reaped* nothing but a harvest of stupid jokes, ridicule and reproach on the inventors. We saw and heard similar conduct and remarks on the several horse rakes, when first introduced—on the corn sheller, on the threshing machine, and many others that we could name. It is true, this spirit of opposition to new inventions is not so prevalent nor so influential now as it used to be, but there is too much of it yet.

What we wish to say, however, is this—at the present time we must lay aside any squeamish caution about "new fangled notion," and look candidly and rationally at whatever is offered to work as a substitute for hands. Suppose it does not do the work quite as nice as you can do it with your hands and laborious care? If it does more in a given time at less expense of labor, nay, if it does not do any more at the same cost than you can do with your hands, better use it, and save your own strength of bone and muscle by the use of senseless material and brute power. We have been practicing the doctrine we preach by using machinery of every kind we could get, in our spring work.—*Maine Farmer.*

In a previous issue of the Maine *Farmer*, the editor discusses the "Increased Use of Farm Machinery"—showing the great advantage of labor-saving machinery in farm operations, especially at the present time, when, in consequence of the war, labor is so scarce throughout the country. He says:—

Facts are being presented to us every day which show the important part that machinery is now taking in performing the labor upon our farms. And not only is it an important, but it is an extensive work they are doing. Before the war, when there were an abundance of workingmen to be obtained at ordinary prices, farm machinery was looked upon with decided favor, from the fact that the hardest part of the labor could be performed by machines and animal power, while manual labor could be profitably turned into other channels of industry. Now, with a gigantic rebellion around us, carrying away to the field of strife, those who have heretofore worked in the fields of peaceful labor, we feel the importance of farm machinery to be greater than ever, and are brought to place our greatest reliance upon it. What could be done in planting and hoeing, on a large scale, without the aid of the seed-sowers and planters, and horse-hoes? How could our hay crop be secured were it not for mowers, horse-rakes and mammoth pitch-forks, elevating

several hundred pounds weight of hay at once, by horse power—or the immense grain crops of the West if the reapers, headers and binders were not brought into requisition? Machines are, in fact, at the present time, absolutely indispensable, for by their agency farmers are enabled to perform the work usually accomplished by manual labor, not only in a better manner, but at a more favorable season. Without their aid, in the present scarcity of laborers, it would be almost impossible to plant and cultivate the usual crops, and quite so to secure them in good order at the time of harvesting. Now, with machines taking the place of human hands, and performing the labor with an intelligence scarcely inferior—we had almost said superior—to that performed by man, we may, by the blessing of Providence, reasonably expect a bountiful harvest. The breadth of land devoted to farm crops throughout the State, we believe to be as extensive as in previous years, and the prospects are encouraging. Grass is in advance of former years, the late weather being decidedly in its favor. * * *

Within a few weeks the *Scientific American* has contained illustrations and descriptions of a Stone-lifting Machine; a machine for loading hay; one for spreading manure from a wagon or cart; one for tilling the soil—a sort of rotary spader; and one for crushing and harrowing. Not all these may prove successful, but it shows the demand for such machines to be great, and leads to the hope that something entirely practicable, will, at no distant time, be found to perform many branches of farm labor not done by hand. The more complete substitution of machine over hand labor in working our farms, the invention and use of which will grow out of the present scarcity of farm labor caused by the war, will be among the blessings the war will bring after it, when peace shall once more be restored to our land. * * * *

Farmers: use all the labor saving machines you can employ. By this means you can till your ground and raise your crops with as much ease as heretofore, and feel yourself above a dependance upon manual labor. We may be confering a favor upon manufacturers to encourage the use of machines, but at the same time we are confering a benefit upon farmers by calling attention to the merits of useful implements. The one aids the other.

A TUBFUL of soapsuds, farmers should remember, is worth as much as a wheelbarrow of good manure. Every bucket of soapsuds should be thrown where it will not be lost. The garden is a good and convenient place in which to dispose of it; but the roots of grape vines, young trees, or anything of that sort will do as well.

From the minutes of proceedings of the American Institute Farmers' Club of New York, held in May last, we make the following extracts:

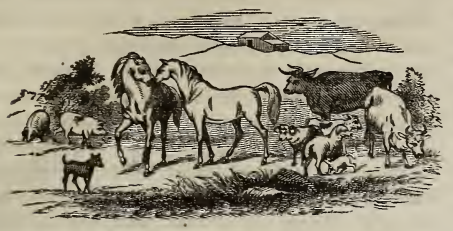
REMEDY FOR WORMS IN SEED CORN.—H. A. Sheldon, Middlebury, Vt., sends the following: "Last season my sweet corn failed to come up, and the planting having been followed by rainy weather, I attributed it to rotting. The second planting also having failed, I examined the hills, and found in the kernels a small chocolate-colored worm, not larger than a small pin, from ½ to 1 inch in length, with pairs of legs extending its whole length. I counted 12 in the husk of one kernel, the inside being all eaten away. Some sprouts an inch long were eaten off. I should like to learn the name of this worm never having seen it except in my garden. I then took a half an ounce of chloride of lime and a quarter of an ounce of copperas, with water enough to mix with one pint of corn, leaving all the corn immersed, and allowed it to soak twelve hours. The seed so prepared came up finely."

POTATO EXPERIMENT.—J. W. Leland, Baltimore, Vt., makes the following statement: "In 1862 I put some potatoes on a plot of grass ground, covering them with mulch to the depth of three or four inches, and they grew and produced bulbs to the size of hen's eggs, and about as white. In 1863 I planted them in the center of a potato patch, and the result was, at digging time, those described above produced potatoes perfectly sound and good while others in the same neighbourhood were badly affected with the rot. As the experiment is very easy of trial, I would recommend to the farmers to try it. It would be a very easy process to raise a supply for seed yearly by the above described method."

SOWING SMALL GRAIN WITH CORN.—Michael Haas, Mendon, St. Jo County, Michigan, wants the Club to advise farmers to sow small grain with Indian corn, and wants to know if any one has had experience with Winter rape, which is much used in Germany. If sown in September, it "comes off in time to sow wheat. It makes a thick mat in the Fall, and remains green all Winter and would be just the stuff to plow under for wheat, as we, now-a-days, don't want it for oil. This is only my say so; I wish to have the Club to give us their advice about it." The seed of rape, he thinks, would cost less than rye, and be equally good for winter feed for sheep. Any crop that will cover the ground and prevent baking, even if it has no other value, Mr. Haas thinks, would more than pay the cost of seed and sowing among the growing corn.

This matter was well approved by several persons present who had had some experience with wheat, rye, and turnips sown among corn.

Live Stock Register.



GOOD DAIRY CATTLE.

Of late years the experience of dairymen has led them to advocate strongly the claims of some of the smaller varieties of cattle as milkers, such as the Ayrshires, Alderneys and Kerrys. These small cattle will not probably, as individuals, yield as great a quantity of milk as the larger kinds; but in quality, and in proportion to the amount of food consumed, are believed to be decidedly superior to both Durhams and Herefords. The Ayrshires originated in the southwest part of Scotland. The original breed was very small, most black, with more or less stripes of white.

The improved breed of Ayrshires have attained their position as superior milkers within the present century, judicious breeding having increased their milking properties, as also their size. Experience of their qualities in this country, shows that if they do not fully sustain their European reputation they come as near to it as the difference in our drier climate allows, one of these cows having produced for many weeks twenty-five to thirty quarts per day.

The small Kerry cow is considered one of the very best both for milk and butter, giving a very large quantity of milk and butter for the food consumed. The cattle are extremely hardy, and will thrive most anywhere, and would be just the breed for such parts of this country as are rough, mountainous and deficient in the cultivated grasses. The milk is very rich, so much so that repeated experiments have established the fact that a gallon of milk will produce a pound of butter. The average yield of milk of a number of these cows is ascertained to be upwards of five quarts per day for each individual the year through, which is fully equal to the yield of the large cows which supply the London milk markets.

On the score of economy in food, these small cattle are vastly superior to the large breeds, repeated experiments having shown that cattle consume food in proportion to size—the average quantity of provender necessary to keep cattle in good condition being three per cent. of their actual weight. That is, a bullock weighing a thousand pounds would require thirty pounds of hay every twenty-four hours, and if in process of fattening an additional allowance of grain or meal. So of cows giving milk freely, they would also require an increase of nutritious food to correspond with the exhausting drain on their lacteal organization.—*Ex.*

BULLS FOR DAIRY PURPOSES.

Among our Agricultural Society debates on Stock Breeding, I never find a word said on the question —When does a bull, as a general thing, show what good or what bad points he may possess? This is an important query, and one which cannot be cast aside effectually by the reply that the animal has come from the very best stock, for we all know that like will not always produce like, no matter what care may be taken to have it otherwise.

Having over twenty years personal association with the most eminent breeders of a popular description (not *breed* be it noticed) of milch cattle, and having individual knowledge of their theories, I have found the following to be a universal rule among them, viz: *Never to use a bull for breeding purposes until he is three years old, and never after he is five years old.*

Now the reason for the first article in the rule is, that bulls for dairy purposes never attain to anything like the maturity, which resolves the character of every point in their physical construction until three years old—and then only after being carefully and well treated. For other purposes the grosser qualities desired, can almost be described at any time.

The reason for the second particular in the rule is that after seven years of age bulls become *sloggy* when unexcited, or over-irritable when excitement comes: that is, they are never placid, or in a condition to infuse a healthy nervous system into their progeny. Besides they grow too heavy and clumsy, and if this is artificially prevented, it is done at the risk of the loss of their requisite stamina; for obesity at seven years of age is, or ought to be the result of their healthy nature.

Some may think the latter branch of the rule nonsensical; but men who have made great names as breeders, have acted, as I have stated above, as if these apparently trifling things were very safe, good sense.—*Cor. Massachusetts Ploughman.*

ALDERNEY CREAM FOR CONSUMPTIVES.—It is said that one of the most celebrated physicians in Edinburgh, whose skill in the treatment of Consumption is very great, recommends the cream from Alderney milk as fully equal to Cod Liver Oil, and it is certainly more palatable. For the sake of consumptives and the breeders of Alderney stock we hope it is true.

ABOUT SHEEP.

Mr. John Pierce, of West Embden, communicates to the Maine Farmer, some information respecting his flock of sheep. He writes that he has lost but one, the present spring, out of a flock of 102 sheep. He believes much of the sickness that prevailed among sheep this spring, was caused by carelessness and neglect last summer. Tar was very high, and but very little of it was used among sheep last summer. As a substitute Mr. Pierce uses sulphur. He writes: "For a substitute I use sulphur and the settlings of lamp oil, which may be found in any oil barrel. It should be mixed to the consistency of paste, when stirred up, as the sulphur will settle at the bottom. I put it on the noses of my sheep at shearing time, and as often afterwards as I can find time to apply it, at least once in four weeks. I salt my sheep with a mixture of salt and ashes once a week." Our correspondent believes in good winter feed for sheep, and also believes the summer time to be the best season to doctor sheep for worms or grub in the head.

Choice of a Breeding Mare.

When choosing a mare for breeding, endeavor to discard the much which has been printed on this subject. Let compactness of form, strength, and an aptitude for exertion decide the choice. The legs should be stout and short—declaring bone and tendon to be present. The upper portions of these members can not be too bulging, thick, long, or muscular. The crest should be highly arched, and characterized by substance; for the movements of the body are much controled by the muscles of the neck. The shoulder can not be too fleshy, so it shall slant properly, is firm to the touch, and is situated below withers sufficiently lofty. For hunting or ordinary purposes, high withers are imperative. For racing they are no recommendation, as lofty action delays speed and lessens the length of stride. The back should be short, save only in the racer. The loins ought to be broad. The hips can not appear too ragged or be too wide apart, while the quarters must seem wide in every direction; nor is it to be considered a fault, should these last parts stand higher than and appear disproportioned to the other regions. Above all see that the channel is wide, the mouth large, and the nostrils ample.—*The Culturist.*

An experienced nurseryman says the safest and surest way to send scions any distance by mail or express, is to touch the ends with a thick solution of gum-arabic, and wrap them in a dry paper. After they have reached their destination, they should be packed in dry sand and buried in the earth until required for use.

An Item in favor of Sheep.

There is one item in favor of keeping sheep, instead of cattle, that we have not seen mentioned, and that is the difference in the labor of taking care of them in winter. The amount of labor involved, and time required, to take proper care of a stock of twenty-five head of cattle, is about as much as a man can attend to. To see that they all drink at least once a day—that the large ones don't abuse the small ones—that they have a variety of fodder in proper quantities at proper times—that the stables are well cleaned—together with the innumerable other things that always need looking after, keeps one doing about all day. While sheep need prudent and watchful care, they do not require that constant attention that cattle do. They do not require to be tied by the head to prevent their doing mischief. They are allowed free and easy access to water, and have sense enough to drink when dry. Their habitations do not need cleaning out daily as do those of cattle.

On the whole, we are inclined to the opinion that the farmer who keeps sheep, principally, can have a pretty easy time through the winter, while those who have large stocks of cattle will find plenty to do.—*Am. Stock Journal.*

Feeding Calves.—A friend of ours who has great success in raising calves on skimmed milk and "corn pudding," adopts the following method: He never lets the calf suck the cow, but teaches it to drink out of a pail. When the calf is three or four days old, he takes about a teacupful of corn meal and pours a pint of hot water over it, stirs it up and lets it scald for a few minutes. He then pours on three or four quarts of skimmed milk, or as much as the calf will drink. In the meantime he has had a piece of iron heating in the stove. When red hot he stirs the milk with it. This "scorching the milk" he considers of the greatest importance when calves are fed on skimmed milk. It prevents it from scouring the calves. As the calf grows older he increases the quantity of corn meal. When three weeks old he gives at least a pint at each meal. The skimmed milk, at first, is only twelve hours from milking, but when the calf is older the milk may be allowed to stand twenty-four or thirty-six hours before it is skimmed.—*Genesee Farmer.*

The fur trade has become a very important branch of the business of Detroit. The amount purchased by dealers last season was valued at $750,000. a single house having paid out $450,009. It is too early to determine the amount this season; but it will be somewhere between $400,000 and $500,090.

Carefully preserve the fallen leaves of trees.

DOMESTIC RECIPES.

CHEAP AND CONVENIENT MODE OF MARKING LINEN.—Take the leaf of the Magnolia tree, lay it smoothly on the linen, the latter being first laid flat upon a hard surface, and take the end of a steel knitting needle, a har pin or some other smooth pointed instrument that will bruise without cutting the leaf and trace the name upon it. The juice being expressed by the instrument used is immediately absorbed by the linen, and is so indelible that it is impossible to eradicate it.

ELDERBERRY WINE.—Put the berries in a vessel, and let them stand until they soften and rise up light; then press and strain them, and to each quart of juice add three quarts of water. To each gallon of this liquid add three pounds of sugar, and to every five gallons add one ounce of cloves and one-fourth pound of ginger. First boil the liquid, (putting in the spices tied in a cloth,) and skim, then add the sugar and boil and skim. Pour in a vessel to cool, then put into your keg and cork tight.

FLIES DESTROYED.—A pint of sweet milk, a quarter of a pound of sugar, two ounces of ground pepper, simmer together for ten minutes, and place about in shallow dishes. If this is true, there is no necessity for using poisonous articles about a house.

CEMENT FOR BOTTLES.—One-third bees-wax, two-thirds rosin; pound the rosin very fine; put it with the wax in a pan and melt. When it is all melted, take it off the fire; stir in finely powdered brickdust till it is as thick as sealing wax; then plaster it warm around the covers of preserve or pickle jars. If used for bottles, cork them tightly, and then dip the top in the cement.

MOCK TERRAPIN.—I have for some years had a dish prepared in my family, which I never met with but once anywhere else, and many think it quite equal to genuine terrapin. I do not, of course—but *many*, I say, do. It is the best way to cook a chicken of which I have any knowledge; and if once tried, it will be preferred by most persons:

Boil the chicken—and no chicken should ever be cooked in any way over one year old—until the meat is pretty tender; then cut up in small pieces, say about the same size we would a terrapin, removing all the large bones and rough parts, but especially retaining the wings and "drumsticks."—Then put in a stew pot, and dress precisely as for a terrapin, viz: butter, salt, cayenne pepper, cream, a little flour, the yolk of an egg well beaten, and some powdered *sugar*. Just before dishing add one or two glasses of Madeira wine, to suit the taste.—This is a new dish, and when a "chicken fixen" is desired for company or otherwise, it is exceedingly handy and *very* "nice."—*Ger. Tel.*

USEFUL RECIPES.

Astringent Drench for Scouring in Calves.—Take of Tincture of Matice, 1 oz., Tincture of Ginger, 2 ozs., Powdered Charcoal, 1 oz., Lime Water ½ oz.—Mix, and give 1 table-spoonful twice daily in a gill of boiled cow's milk.

Tonic and Alterative Drench for Cows in a State of Marasmus (Wasting.)—Marasmus often terminates fatally among cattle; it is insidious in invasion; slow in its progress; accompanied by loss of flesh, prostration, dullness, loss of hair, blanched mucous surfaces, œdematous swelling of the limbs; diarrhea; death. Tincture of Ginger, 4 ozs., Tincture of Golden Seal, 6 ozs., Iodide of Potass, 4 drachms, Water, 1 quart. *Directions.*—Mix the iodide of potass with the water, by shaking them together for a short time, then add the tinctures. *Dose*—1 wine glassful night and morning.

To Protect Animals against the Torture of Flies and Insects.—Take of Walnut leaves and the leaves of Lobelia, of each 4 ounces, add 1 gallon of boiling water, let the mixture stand until cool, then express the fluid through cotton cloth, and add 4 ounces of the tincture of aloes. *Directions.*—Apply a small quantity of this compound daily to the surface of the body by means of a sponge.

Antidote for the Bite or Sting of Venomous Reptiles.—Plantain Leaves (Plantago Major,) 4 ozs., Lobelia Leaves, 2 ozs., Boiling Water, 1 quart. *Directions*—When the mixture becomes cool, bind a quantity of the herb on the affected part, and give the animal, as a drench, four or five ounces of the remaining fluid, every four hours.—*Stock Journal.*

Cure for Bots.—Take one ounce of sulphuric ether, and a half pint of warm water; put into a bottle and drench the horse with it.

Blind Staggers.—It is said the following is an effectual remedy for this formidable disease in horses: Gum camphor, one ounce; whiskey or brandy, one pint—dissolved. Dose—one gill, in a half pint of gum arabic, flax seed, or some other mucilaginous tea, given every three or four hours, seldom necessary to give more than three doses. The horse must be kept from water twenty-four hours. Never bleed this disease.

Fleas on Dogs.—Many of our domestic animals are sorely pestered with fleas; the best remedy as a "*ticket of leave*," for such tormentors, is a few drops of the oil of pennyroyal, to be rubbed over the region of the spine. Should the fleas be very numerous, an infusion of the herb may be prepared, with which the animal should be bathed occasionally.

Cure for Stretches in Sheep.—The cause is costiveness. *Cure*—2 oz. Epsom Salts and 1 drachm of ginger, or an equivalent of hogs lard or linseed oil.

THE
MARYLAND FARMER & MECHANIC,

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THE CROPS AND BREADSTUFFS.

We take the following accounts of the crops and breadstuffs from a variety of exchanges, received at the office of the FARMER. So far as the state of the crops is concerned, the extracts we give throw but little light on the subject, except as respects particular neighbourhoods There is, however, one thing that may be regarded as certain, and that is—that prices will rule high throughout the ensuing year, for the circumstances of the country are such, that it is impossible it should be otherwise.—*Eds. Maryland Farmer.*

HARVEST.—From the general appearance of the wheat fields, says the Harford *Ægis*, June 24, harvest will soon be upon us, and much anxiety is felt about the scarcity of hands. Our yield of wheat does not promise to be large. There is much complaint of fly, and in some localities rust, while in many fields there is but little wheat on the ground. Oats and grass, looks well, and promise fair crops. Corn and potatoes also looks well, and if the season continues good, a very fair yield may be expected.

THE CROPS.—The wheat is now, almost all, ready to harvest, says "*The Phœnix*," (Somerset county, Md., June 21st,) and some of the mowers are hard at work. A few of the farmers anticipate a good crop, but many are sadly disappointed. The corn and oats seem to promise a fine crop. The greatest difficulty is in procuring laborers; and wages are very high.

FLY IN THE WHEAT.—In the lower districts of this county, says the *Cecil* (Md.) *Democrat*, the fly is said to be committing great ravages upon the wheat crop. In some instances scarcely half crop will be realized. The crop in the adjacent counties in Maryland and Delaware has also suffered severely from the same cause.

THE WHEAT CROP.—From information received from the farmers of the different parts of the county, says the *Easton* (Md.) *Journal*, we learn that there will not be more than half a crop of wheat gathered this year. In some instances in the Bayside District, we understand they will not cut, as it would not pay them to do so, it having been ruined by the frost, the hail, and the fly.

HARVEST.—Some of our farmers will commence harvesting to-morrow, (June 17,) but general harvest will not commence until next week. The wheat, generally promises a good yield, though in some parts of the county, a full crop will not be realized.—*Centreville Citizen.*

THE CROPS.—In writing about the condition of the growing crops, says the *Germantown* (Pa) *Telegraph*, June 22d, we are limited to a very contracted region of country; that is to say, we can only speak of the near States. In Iowa, Missouri, Minnesota, portions of Indiana and Illinois, and Michigan, the wheat crop is not all that it should be—the winter wheat especially has been greatly winter-killed; but this, to a considerable extent has been made up by heavy sowing of spring wheat, which from all the accounts we have, look well. As to Pennsylvania, Maryland, Delaware. Ohio, New Jersey, New York, most of the New England States, Kentucky, and large portions of other States, the Wheat will be a full average crop. In the States immediately around us, we believe we are justified in saying that the growing crops generally rarely if ever looked better. The grass crop will be very heavy; corn is as high as we ever saw it at this season, notwithstanding the cool weather; oats are well-set, dark and strong; and potatoes have come up regularly and appear as well as could be desired. As to the rye crop, which has become an important one we never saw it more luxuriant.

THE FRUIT CROP.—There can be little doubt, says the *Harford* (Md.) *Ægis*, of an abundance of fruit this season. We are informed by persons from all parts of the county, that the prospect was never better.

THE FRUIT CROP.—We are distressed to find, says *The Pheonix*, (Somerset Co., Md.) that the "rose bugs" are making great ravages on the fruit. They are destroying the peaches, cherries, apples, &c., eating the leaves as well as the young fruit.

The Cincinnati Gazette says a two-thirds crop of winter wheat may be calculated on from at least ten central and northwestern States; and of spring wheat there will be a greater yield than ever before, both on account of greater breadth of ground sown and the favorable weather for its growth.

WHEAT CROP.—The reports from the great wheat growing districts of the West are coming in a little more favorably. From the great mass of reports at hand, we arrive at the conclusion that winter wheat will not be more than a two-thirds crop under the most favorable circumstances. As to spring wheat, the indications are that the yield will be a full average one at least. But however much there may be, there can scarcely be a doubt but that it will all be needed, and at good prices. The army consumes more than double the quantity of flour that the same number of men would use at home, where vegetables constitute so large a portion of the food of the people.—*N. Y. Price-Cur.*

THE CROPS IN MARYLAND.—It is stated that in Washington county the crops of grain, grass and fruit promise an abundant yield. In Somerset the wheat harvest is in progress among such of the farmers as have consented to pay mowers three dollars per day. The yield, it is said, will be less than was anticipated. The farmers of Dorchester also complain that their wheat will turn out rather poor, while the corn is suffering for want of rain.

Next week, says the Chestertown Transcript, June 25th, will be general harvest in Kent. The crop of straw is generally light, but the grain has ripened finely and is of the best quality.

CROPS IN VIRGINIA.—We wish, by the way, to correct a misapprehension in regard to the condition of such supplies in the parts of Virginia which we have been recently traversing. If any one has formed a picture of a starving, foodless, fenceless, desolated South, let them look for a moment on the true picture of the country which our army has occupied for several weeks. With the exception of a few poor families, who often make pretence of destitution to save themselves from robbery at the hand of the soldiers, the country is abundantly supplied with everything. (?)—Graineries are filled with corn till they overflow. Gardens grow all the luxuries of the season. Flocks and herds have not deserted the pastures and hills. Corydon and Thyrsis eat their country messes in the shade. Fowls frequent the barn-yards, and the dove cotes are not abandoned by their meek and innocent inmates. Our horses wade through clover a knee deep, and the growing wheat brushes their sides as they pass through it.—*N. Y. Tribune.*

What a charming place Virginia must be, according to the Tribune's man. We had quite another idea of it.

☞Present appearances point to a short crop of hops in New York this year.

BREADSTUFFS AT HOME AND ABROAD.

The movements of agricultural products, especially of Breadstuffs, attract a good deal of attention, and with Foreign trade balances largely against us, the exports have an important bearing upon the financial and commercial affairs of the Country. It is impossible to determine with any degree of accuracy the quantity of produce held in the Western States; but judging from the fact that the supplies drawn thence since the reopening of Canal navigation are below those of last year, we premise that large quantities have yet to come forward. The withdrawal of immense numbers of men from agricultural pursuits has interfered, to some extent, with the forwarding business, while the abundance of money and the low rate of interest have, without doubt, enabled dealers in the West to hold largely on speculation, in anticipation of higher prices. The receipts at Chicago during the last two weeks are considerably above those for the same period last year, and the aggregate supplies at all the Upper Lake ports are to a corresponding extent. From movements at distant points in the West, therefore, the conclusion is irresistible that the supplies, except Corn, are fully equal to those of last year. The exports appear to be below the general expectation, the parity of prices in home and foreign markets not favoring an active movement, notwithstanding the remarkably low rates of freight. Some heavy engagements of Wheat were recently effected for the United Kingdom, mainly on speculation, but the late political news being more pacific, the movement has received a check. The stock of good shipping grades of Flour and Wheat in this market are light, and with Gold vibrating between 195 and 200, holders have little or no difficulty in sustaining prices at a comparatively high range. There have been late speculative purchases of Amber Spring Wheat and Extra State Flour for July, at prices rather above those current for immediate delivery. This would seem to indicate confidence on the part of the purchasers in continuance of higher prices. There are apparently no solid grounds, however, for any further considerable advance, as some anticipate, unless Gold should go still higher. Our latest advises from the British markets report rather more tone, yet quotations afford no margin on shipments. The accounts from most parts of the United Kingdom in reference to the appearance of the Wheat crop are, with few exceptions, highly favorable. The warm weather has produced a rapid growth, and the prospect was that the harvest would be commenced at an earlier period than usual. With regard to supplies in England, the London *Shipping Gazette* estimates that of Wheat there at 2,000,000 quarters more than at the same period of 1863, notwithstanding the excess of deliveries over last year. The quantity of Wheat on hand in Russia is variously estimated. Judging from the heavy contracts entered into for forward shipment, the importations thence into the United Kingdom will be fully made up to the average of former years. Prussia it is understood, stills holds a large supply of Wheat, a considerable portion of which, will be sent direct to English millers. On the whole, therefore, there is every prospect that a liberal supply of Breadstuffs will be available under any circumstances, both at home and abroad, and higher prices are not very probable, except under some fortuitous circumstances.

COTTON.—Supplies on this side of the Atlantic are gradually dwindling away. The failure of the military expedition in the Red River country—one of the most prolific sources of supply in the South—the repeal of the trade licenses in Gen. Washburne's department, the rapid rise in Gold, and the steady advance in the English markets, have combined to carry prices up to an altitude hitherto unattained, and with current rates of Exchange favoring shipments, the prospects of manufacturers are anything but encouraging. The stocks in the hands of consumers are used up closer than usual; and as the chief reliance of manufacturers is now upon the decreasing receipts from New Orleans and Memphis, and the precarious supplies afforded by the capture of blockade runners, a further advance in prices would seem to be inevitable, unless there should be a considerable abatement in rates of Gold and Exchange, of which there is, apparently, no immediate prospect.—*N. Y. Price Current.*

DEMOREST'S NEW YORK ILLUSTRATED NEWS.—We have received several numbers of this elegantly illustrated weekly, and pleased with its varied and interesting reading and illustrations, each of the latter executed on a ground tint, adding much to its beauty. It is devoted to News, Arts, Science, Entertainment, Music and Fashion. A department for Ladies, conducted by "Jennie June," a charming writer—and the Latest Fashions, with illustrations, will be given in each number by Mme Demorest.—Issued every Thursday at 39 Beekman street, New York, at $4 per annum.

Harvest being nearly over our farmers not already supplied with Horse Powers, Threshers and Cleaners, Fanning Mills, &c., will be looking round to make a selection—knowing this, the Messrs. R. & M. HARDER, of Cobleskill, New York, avail themselves of our columns to apprise all that they have, what they consider, the best machines of that kind. The testimony in favour of their premium machine is voluminous, and can be examined at our Rooms. See their advertisement.

THE AMERICAN ARTISAN AND PATENT RECORD.—We hail the advent of this new weekly, devoted to fostering the interests of Artisans and Manufacturers, and encouraging the genius of Inventors, together with matters interesting to Agriculturists. It is gotten up in the best style of typography, and its literary character is of the highest stamp. It is illustrated with designs of new Implements, Machines, &c. We would recommend it to all interested in the Arts and Manufactures. Published weekly by Brown, Coombs & Co., 212 Broadway, N. Y., at $2 per annum. Copies can be seen at our Rooms. We will furnish "The Artisan" and "Maryland Farmer," for $3.

GROWING SUGAR CANE IN MARYLAND.—Dr. D. L. Flemming has purchased Mr. James S. Lecompte's farm, within one mile of Snow Hill, for $3,000.—This farm contains one hundred and twenty-five acres of land; and is supposed to have been sold at a fair value.

The Doctor is erecting a splendid four-horse-power sorghum mill on the farm, which will be capable of turning out five hundred gallons syrup per day, and which will be of vast service to the whole neighboring community. His enterprise and public spirit are worthy of all commendation. We warrant Dr. F. will make some of his less enterprising neighbors open their eyes ere long, and he will also make his farm one of the most productive in this neighborhood. He has planted a lot of West India sugar cane, and will have much other valuable truck planted later still.—*Worcester County Shield.*

RAISING PEACHES IN POTS.—One of the most successful cultivators of peaches and nectarines in pots, says the *Country Gentleman*, is ISAAC PULLEN, of Highstown, N. J. At the time of a recent visit, on the first day of June, I found trees loaded with beautiful, ruddy specimens of Troth's Early Red, just softening into maturity, and several other varieties preparing immediately to follow. The crop of Hale's Early was gone, having ripened during the latter part of last month. Nothing could present a more beautiful appearance than dwarf trees three or four feet high, hanging full of the matured deep crimson fruit of the Hardwicke nectarines, on one of which I counted about seventy specimens.

NEW YORK STATE AGRICULTURAL SOCIETY.—We have received from the Secretary of this Society, Benjamin P. Johnson, Esq., of Albany, the list of Premiums and Regulations for the Twenty-fourth Annual Fair, to be held at Rochester, September 20, 21, 22, 23d, 1864—which list embraces a very liberal catalogue of Premiums for Cattle, of all classes—Horses of every description—Sheep, Swine, and Poultry of every variety—Plowing Implements and Machinery of every class—Steam Engines—Grain, Seeds, Vegetables, and Dairy—Domestic Manufactures—Miscellaneous Department, embracing almost everything—Flowers, Plants, Designs and Fruits—Field Crops—Essays—Experiments, &c., &c. The Premiums offered are on the most liberal scale, and the 24th exhibition of the society bids fair to excel all former displays.

THE AMERICAN POMOLOGICAL SOCIETY.—The Tenth Session of this National Institution will commence on the 13th of September, in the city of Rochester, New York, and continue several days, to which all Horticultural, Pomological, Agricultural and other kindred institutions in the United States and the British Provinces, are invited to send delegations, as large as they may deem it expedient; and all other persons interested in the cultivation of fruits are invited to take seats in the convention.

This meeting will take place the week preceding the Anuual Fair of the New York State Agricultural Society, thus giving persons the opportunity to attend both occasions. The Fruit-Growers' Society of Western New York, will place their splendid fruit entirely at the disposal of the congress.

THE WOOL GROWERS' CONVENTION will be held at the City Hall, Rochester, on Wednesday, September 21st, during the Fair of the New York State Society.

THE VOSHELL HOUSE.

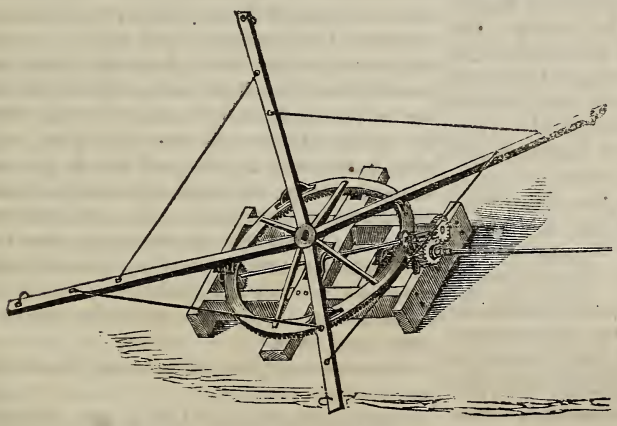
The Chestertown *Transcript*, speaking of this new House, says:—"This handsome and commodious Hotel, for which our town is indebted to the energy and enterprise of Mr. J. C. Voshell, will be thrown open to the public about the fifteenth of July. It is most admirably situated in the very centre of the town and commands every principal avenue from the country. The main building is fifty by sixty-two feet, four stories high, with a three-story back-building, twenty-five by thirty-seven feet. The first story is conveniently arranged for Bar room and Restaurant, cook and wash rooms, and three fine store rooms fronting on High street. The building is imposing in its general appearance, admirable in all its appointments, and unsurpassed by any hotel on the Peninsula. We predict for Mr. Voshell a measure of success commensurate with his outlay and enterprise. The drawings were by Thos. M. Dixon, of Baltimore." We would recommend our friends journeying that way to stop at Voshell's, as he is a gentleman who knows how to "keep a hotel."

FARM IMPLEMENTS & MACHINERY.

NO. SIX.

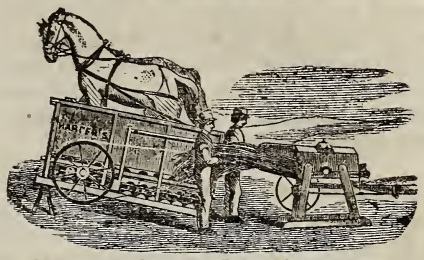
HORSE POWERS.

Horsepowers for propelling Threshing machines, and for other purposes, have long been in use, and although of a great variety of patterns, embrace really but two general principles. One is known as the Railway or Tread Power, and the other the Lever or Sweep Power. They are quite different in principle and construction, and each is divided into a variety of styles and patterns, many of which have a general similarity whilst they differ in particulars. The Sweep or Lever Power has been longer in use than the Railway Power, and is more generally employed in the South and West. In other parts of the country the Tread Power is in most demand: especially in New England, where the Lever Power is but seldom used.



LEVER OR SWEEP HORSE POWER.

It is about thirty-five years since the Railway Power was first introduced by Mr. Lane of Kennebec county, Maine. Since then, like most other inventions, it has been greatly improved by successive builders. The first machine was so constructed that the horses traveled upon iron rods instead of the wooden floor, as at present. The next improvement was known as the leather belt machine, invented in the same State and about the same time. This was much lighter and cheaper, but soon went out of use. The principle of the Tread power, was however, conceded to be a good one, and grew in favor, which induced parties to continue the construction of them. J A. & H. A. Pitts and Luther Whitman, of Maine, both made improvements upon



RAILWAY OR TREAD HORSE POWER.

them which were successful, and as a consequence, they speedily became popular throughout New England and other sections of the country.

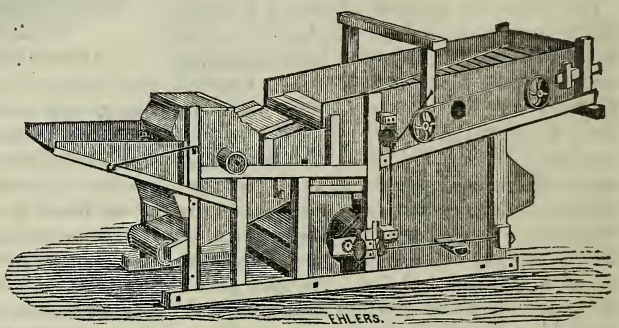
In a long article on "American Agricultural Implements," published sometime since in the Journal of the Royal Agricultural Society, the author, among other things, very highly recommends the American horse power, of the endless chain, or tread mill principle. "This, he says, is undoubtedly the most effectual method of applying a limited amount of animal power to such purposes as threshing, winnowing, grinding, churning, sawing wood, and all others which require rotary motion. I am convinced they would be found a great convenience to many small farmers in this country; and in many of our colonies, where steam is out of the question, they would be invaluable." A power on this principle was manufactured in Yorkshire, England, and was subjected to severe and careful tests, which showed that it did sixteen per cent. more work, with the same force, than the best of English horse-powers.

The Lane machine, with the iron floor, was introduced into Maryland about 1833, but, as was the case elsewhere, it was soon abandoned, because of its high cost and hard draft upon the horses. In many sections of the country the people were at first prejudiced against the tread power, but it was shortly after restored to favor by the introduction of the improved kind which are now in general use. For small farms the Tread or Railway power answers a good purpose; but for large farms the Sweep power is more desirable. With the Railway you

are limited to the work of one or more horses, but with the Sweep you may work from two to eight, or more horses. Among the multiplicity of horse powers we would not undertake to designate which are best, as many of them are excellent machines,—but one thing we would suggest to the farmer, which is, that in the purchase of a Power he should look to simplicity of construction and apparent durability and strength. These are important considerations to all those who desire to do their work without interruption, at a time when they can least afford to be subjected to delays.

THRESHERS AND CLEANERS.

The above is a representation of an improved Thresher and Cleaner. There are a number of patterns used throughout the country. They may be attached to any of the common Horse Powers now in use, either of the Railway or Sweep patterns—and will thresh and clean Wheat, Oats, Rye or Barley, at one operation, and is a great saving—when properly managed—over the common thresher, and is far more convnient.



Threshing with this machine, may be done in the field or barn, as the wheat is deposited in bags or boxes, as fast as delivered from the machine. For a long time many of our farmers considered its introduction as altogether unnecessary, and by others as too complicated for common use,—but these notions and objections have all been exploded by practical tests, and the Thresher and Cleaner is now being generally adopted in almost every part of the country—more especially at this time, when labour has become so scarce, that the farmer is compelled to adopt every means to facilitate the progress of his work, by availing himself of every thing calculated to replace the lack of that labour. Time now is emphatically money, and the machine that saves labour is the great desideratum sought for. It is true that this machine is more complicated than the common thresher, and the common thresher still more complicated than the old way of tramping out grain with horses, but it is as much an improvement over the common thresher, as it was over the old way of tramping. When well built they may be easily managed by any person who will give it attention.

Machines for threshing and cleaning grain have received a large share of attention, and have been rendered so complete that the grain is now threshed, cleaned, measured, and bagged, and the straw stacked, at one operation. Improvements have also been made in the machines, by which the dust is taken up and conveyed away, and also by which the bands are cut with the sheaves fed into the thresher. Connected with these is a class of machines of recent origin, by which clover is threshed, separated from the straw, hulled and cleaned, at one operation.

MANURE FOR THE VINEYARD.

In Dr. Carter's *Vegetable Physiology* are found the following statements :—

"Nothing more," says a vine grower on the banks of the Rhine, "is necessary for the manure of a vineyard than the branches which are cut from the vines themselves. My vineyard has been manured in this way for eight years without receiving any other manures, and yet more beautiful and richly laden vines can scarcely be pointed out. I formerly followed the method usually practiced in this district, and was obliged to purchase manure to a large amount. This is now entirely saved, and my land is in an excellent condition. When I see the fatiguing labor used in the manuring of vineyards ; horses and men toiling up the mountains with unnecessary materials; I feel inclined to say to all, "come to my vineyard and see how a bountiful Creator has provided that they should manure themselves, like the trees of the forest, and even better than they! The foliage falls from the trees in a forest, only when the leaves are withered, and they lie for years before they decay ; but the branches are pruned from the vines about the end of July when still fresh and moist. If they are then cut into small pieces and mixed with the errth, they undergo putrefaction so completely that, as I have learned from experience, at the end of a month, not the smallest traces of them can be found."

The same author gives the following from a still poorer vine grower :—

"For the last ten years I have been unable to place dung on my vineyard, because too poor to buy it. I therefore dug my vineyard as deep as I would manure it ; cut the trimmings into very small pieces, placed them in the holes, covering them with earth. In a year I had the satisfaction of seeing my barren vineyard become quite beautiful. This plan I continued from year to year, and now my vines grow splendidly and remain the whole summer green even in the greatest heat. All my neighbors wonder how my vineyard is so rich and that I obtain so many grapes from it, and yet they all know I have put no dung on it for ten years."

Horticultural.

TALK ABOUT FRUIT.

The following are extracts from the minutes of the American Institute Farm Club, held May 12th last:—

The discussion was opened by an inquiry of J. SHELDON, Alfred Center, N. Y., whether the cion of sweet fruit, if engrafted into the branch of a sour tree, will produce fruit as sweet as though set in stock of its own kind. He says:

"In our orchard are two trees, one being Rhode Island Greenings and the other Golden Sweets, the Greenings being drafted in a sweet and the Golden Sweets in a sour tree.

"I noticed every year, both varieties are quite small and covered with black mildew spots, while the same varieties which have been grafted in trees of a like kind were smooth and large."

Prof. THURBER said that this is not a new question, but it is doubtful whether the fruit is affected by the stock, or by the pollen of blossoms of a different variety. A letter from an experienced fruit grower in Washington County, New York, says that Winter apples grown in an orchard where no other varieties grow, will keep better than if grown in orchards of mixed fruit, which he attributes wholly to the influence of pollen. Prof. Thurber expressed his belief in the influence of pollen, more than stocks or locality. All fruits may not be affected in this way, but it is at least reasonable to suppose that some will be. We know that all the cucurbita family mix readily, and so does corn. Some seasons pollen appears to mix more readily than others. It is a very interesting matter to know how far fruit may be affected in this way. It is possible that several things now looked upon as phenomena can be explained by the theory of pollen impregnation.

Grafting.—A. H. MILLS, Middlebury, Vt., writes May 9: "In regard to grafting, the proper time will vary with different latitudes. It is now just the right time here, and may be successfully performed for two weeks to come, provided the cions have been carefully preserved. I prefer fresh-cut cions if I can get them; but they can be used only when the buds are swelling; after the leaf begins to appear it is too late. Plums need to be grafted earlier than apples —as soon as may be in the Spring. I have some that I grafted the 5th of March, which was the first warm day we had here, and they are now coming out. I also grafted some the 5th of April, the next warm day, and they are doing well. I prefer splice grafting when I can get small trees (and it is of not much use to graft any others,) as it does not injure the tree, and leaves no scar. I make my wax by melting together one ounce of tallow, two of beeswax, and three of rosin, then turn it into water, and work it in the hands—the longer the better. This will not melt in summer nor crack in winter. It is not absolutely necessary to wax the ends of the cions, but I prefer to do so, as they then keep fresh, clear to the ends."

Mr. KNOWLTON gave the following as the composition of wax to be used warm, with a brush:—Rosin, two parts; black pitch, two parts; white pitch, tallow, and beeswax, each one part. A man can set a hundred grafts a day more with liquid than with hard wax. We cut up and fix the grafts ready for use before commencing to set them. We do not lose 3 per cent. if the operator is careful to get a proper union of the bark of cion and stalk. If the bark of the stalk is thick, set the cion a little inclining outward. We have to heat the wax pretty often.

Mr. WILD said that he knew a grafter who keeps his wax hot in a glue pot.

Mr. PARDEE suggested keeping it warm by packing the pot in a box or basket, with some non-conducting material. He had seen a lady keep the tea-pot hot in this way. A neat basket, lined with cotton batting about two inches thick, with a neat cover to hold in the heat. This arrangement keeps the tea hot four times as long as it would keep so if exposed to the air. I think the same plan would answer well for keeping grafting-wax hot.

Dr. WARD said that until this year their practice had been to cut grafts from the tree the same day they are to be used. The men sit down and cut about five hundred all ready for setting, and throw them in a basin of water. The composition of the wax we use, is rosin four parts, beeswax two parts, tallow one part; but we often vary this to suit the condition of the weather. Sometimes a change occurs from morning till night, making it necessary to vary the composition so that the wax will be harder or softer. It is not a question whether we shall use hard or soft wax, but which will insure the greatest preservation of the tree. In cleft-grafting the split is apt to open as the graft grows, letting in water, causing decay. The advocates of liquid wax claim that it will not crack, and is therefore a more sure protection.

Mr. KNOWLTON said that cherry cleft-grafts were very apt to be lost through the failure of the wax. He has never known one to fail since he has used the liquid wax.

SOLON ROBINSON said that it had been stated here that saliva was injurious to grafts. He saw Charles Downing grafting the other day, and noticed that he invariably put the cions in his mouth after cutting them ready to set, holding them there while preparing the limb. Mr. Downing said this had al-

ways been his practice, and he did not believe it injurious to the cions, unless the saliva of the grafter was made poisonous by rum or tobacco—things which he had never used in his life. I also noticed that some of the cions which he was setting had started so far as to show the leaves.

Prof. THURBER—I think the time of setting grafts may be protracted much later into the growing season than is generally believed. One fruit grower stated to me that he would not hesitate to set grafts in July if the condition of the stock was well ahead of the cion.

CULTIVATION OF THE STRAWBERRY.

The land should be rather elevated, and not liable to excess of water; a southern exposure, strong loam, such as would be called good wheat and timothy land; a sward plowed under for a crop of corn, is the best preparation of the soil the year previous to planting strawberries. After removing the corn in the fall, or during an open spell in the winter, let the stubs be cut off and the ground plowed deeply; then give a light dressing of manure broadcast, the essence of which will be absorbed by the mellow earth during winter, and be prepared for giving nourishment to the young plants the following season. As soon as frost leaves the ground in March, set out the plants. If the variety be Albany, Iowa, Hovey, or any kind that bears well in beds, mark out the rows five feet apart, and set the plants about one foot apart in the rows, and let them spread evenly over the ground; the offset or stools should be fastened not closer than within six inches of each other, and all surplus runners destroyed the same as weeds when they appear; for the value of the fruit will be lessened by an excess of plants, as certainly as a crop of corn would be lessened if the quantity of stalks were increased above what were sufficient to give the greatest supply of grain.

If the variety be Triomphe de Gand, Trollope's Victoria, Lady Finger, Peabody, or any kinds that are particularly adapted to hill culture, mark the rows two and a half feet apart, and set the plants one foot apart in the rows, and keep the runners all cut off.

During the first winter, the vines should be mulched over with stable manure, straw, leaves or litter of some kind, to protect them from the severity of the winter. The next summer they will yield their first and large crop, after which it will require much labor to keep the beds mellow and clear of weeds and grass; and the crops of fruit will diminish rapidly—and there is great economy in having a new plantation coming on to take the place of the bearing one, so that after the first and best crop of fruit is gathered, no time or labor need be wasted waiting for inferior ones; but the ground may be plowed and will be in fine condition for a crop of wheat, to be followed with grass.

Thus the strawberry will form a part of the rotation of farm crops, coming in after corn and before wheat.

Under the above treatment in beds, we have had 210 bushels per acre, which, sold at nine cents a quart, brought $600.

When it is desired to continue a strawberry bed several years in the same place, the plants should not be allowed to strike root nearer to each other than from ten to twelve inches, so that a small iron tooth rake may be passed freely among them to loosen the surface and prevent grass and weeds from starting, mark the rows five feet apart, and set the plants one foot apart in the rows, and as the plants throw out runners, fasten two on each side of the parent, at ten inches distance, making beds three feet and six inches wide, and leaving eighteen inches for alleys. All other runners should be cut off.

This arrangement will average just one plant to a square foot of land, counting alleys, and will give 43,560 plants to the acre, and allowing four hills, occupying four square feet of land, to yield one quart of fruit, the acre at the same rate will yield 340 bushels.—*Parry's Essay on Cultivation of Small Fruits.*

JAS. H. MASON, writing to the Farmers's Club of New York, says that the following mixture has proved a perfect protection against the fly that deposits the eggs which produce the borer:—A strong decoction of tobacco, to one gallon of which add a gallon of soap, and half a pound of sulphur. The trees were washed with this mixture, and no eggs were deposited, though the trees had been previously infested, and required much work with the knife—It was repeated next year with like results. He does not think that the application will kill the worms already in the tree, but that it will keep them from getting in.

WATERING POTS—In every garden there should be provided a good tin watering pot, which, if properly taken care of, will last for many years. Water applied with one of these implements effects much more good, especially where the plants are small and delicate, than where poured on from a pail or bucket. Watering pots should be painted inside and out, or thoroughly coated with some substance that will prevent the corrosion of rust, and add to their durability.—*Germantown Telegraph.*

Clamorous people should remember that the tail of the rattlesnake makes all the noise, but the head does the execution.

The Apiary.

The following article was sent us by a subscriber, with a request to republish. We know our friend to be a "knowing one," but do not agree with him in his opposition to "patent" hives—as we know many of them to be well adapted both for the accumulation of honey and for the protection and comfort of the bees. The bee is a marvellous little creature, and his habits, &c., are being better understood every day from the careful study of his character, and it is not at all surprising that the lovers of this "manipulator of sweets" should be anxious to have them supplied with a hive that he can indeed feel is "home, *sweet* home." We believe our friend's "oblong box hive" to be a good one—but we should not discard a *good* thing simply because it is "patented":

THE BEE HIVE.

"Do not enter largely into the trial and experiment with patent hives. It will not pay. Sporting gentlemen, and fancy farmers who have ample means and plenty of cash to spare, can afford to try the experiment of testing and becoming disappointed with patent hives. But farmers of moderate means, I ask you *to make your own.* You can make just as good a hive, and one that will answer every purpose of the costly patent. You can make a hive that will save the bees and give you the honey they do not need, and this is all that a ten dollar patent hive can do. I object to patent hives, on these grounds: There are too many kinds, quite as numerous as patent churns and washing machine. They are too costly for general use. They are too complicated in their construction, having as many labarynths and angles as a diagram of a proposition in geometry. And again, they are no better than a simple, unpatented article, that every farmer can make with a plane, saw and hammer. I advise you not to buy largely of patent hives, but to make your own. And I will tell you how—perhaps you know already, as well as I do.

The hive that answers all purposes, and the one that I would recommend, is the oblong box-hive, with a chamber and drawers in the top. It should be made large enough in the lower part to hold plenty of honey for the winter consumption of the colony. The chamber above should be of sufficient size to contain two drawers that will hold the surplus honey that the bees do not need. All the joints of the hive should be perfectly tight, so as to afford no lurking place for the bee-moth or vermin. The drawers should be alike and completely fill the chambers. A movable pane of glass should constitute the end of each draw. The chamber should be closed by a sliding door, or a panel with hinges.—Each drawer should communicate with the lower apartment by a hole in the centre of the bottom, an inch or more in diameter. This hole should be closed with a piece of tin, until the bottom of the hive is filled with honey. In no case should the bees be permitted to make honey for the use of their owners until they have filled their own store-house with a winter's supply. The above described hive is equally as good as a ten dollar patent one, and will cost but a trifle. It affords a chance to get the surplus honey without destroying the bees, and this is the only commendable advantage of any of the patent articles.

The Bee House.—Where is the best place to put the hives? Some prefer placing them under the shade of a tree, upon a platform, without any other covering. Others think it best to arrange them in a house or shed, closely enclosed on three sides with a roof above. About a middle course is evidently, the better way, viz: a simple roof covering, open on all sides. Bees want plenty of pure, fresh air. They will not thrive without it. A bee house enclosed on three sides is too close and hot, and will not admit enough air. A simple roof covering is all that is necessary, under which is a form for the reception of the hives. The face of the hive should open to the south, and should be placed, if possible, so that from 10 to 2 o'clock it may be shaded by some tree. All bee hives, during the summer months, should be elevated from the bottom board, on which they stand, at least half an inch. This can be done by placing a wedge of wood under each corner of the hive. Free ingress and egress are thus allowed, also fresh air, and no lodging place for the eggs of the miller.

The drawers should go in on the back part of the hive, so that they can be approached without disturbing the bees or getting stung by them.

Hiving the Colonies.—Young swarms of bees begin to leave the hive usually about the middle of May. From one to three young swarms go out in the course of six weeks from a single well stocked hive. It requires some considerable tact to hive the young swarms with success. They commonly leave the old hive from nine o'clock to three o'clock in the afternoon. The day before swarming, they often forsake the hive and hang out in a mass upon the sides or bottom of the hive. Do not be in too great a hurry to secure them after they alight—go to work steadily—there will be plenty of time.—Place a table under the limb on which they have alighted, spread over it a clean, white cloth, a sheet or table cloth will answer the purpose well. Place upon this a couple of pieces of slit-work, about ten inches apart, upon which to elevate the hive. Now take firmly hold of the limb while an assistant saws

it cleanly off. Place it with gentleness upon the table between the two billets of wood, and put the hive over them. Now cover the hive with a second sheet and then leave them; they will soon go up into the hive. It is well to rub the inside of the hive with salted water or green walnut leaves, before hiving the bees. They take to it sooner, and more kindly. At night-fall place the hive, with much gentleness, where it is to remain during the summer. The drawers should be closed in the new hive until the house department is filled."

Ladies Department.

WINDS.

Dance, little zephyrs, blithely dance,
Prance in the green grass, skip and prance,
In elfin ring;
Breathe your lays on the meadow-lea,
Laugh and leap in your sportive glee,
Dance and sing!

Sing, ye soothing southern gales,
Softly breathe your evening tales,
And relieve;
Kiss me with your breathing lips,
Touch me with your finger-tips,—
Softly breathe!

Wail, wild winds of the mountain clime,
Toll a dirge for the olden time
In sorrowing tone;
Haunt the lonely wand'ring streams,
Where the moonshine coldly gleams,—
Wail and moan!

O, melodious autumn winds,
Murmuring 'mid the mingling pines,
Mild and grand;
Peal your anthems great and strong,
Yours is GODS, triumphant song,
Through the land!

Cruel, chilling wintry blast,
How thy shrieks go shiv'ring past,
Shrill and sheer;
Pale and cold the timid sky,
Like the shadow of a sigh,—
Cold and clear!

Blessed spring-wind! dawning faith!
Waking vigor out of death,—
Sweetly sing!
Warble in the budding bowers,
Perfum'd with the early flowers,—
All hail! when all the birds are ours!
Winds of Spring!

Rural New Yorker.

Warm valleys, with a rich soil, are more liable to cause destruction of trees or their crops by cold, than moderate hills of more exposure, and with less fertile soil; the cold air settling at the bottom of valleys during the sharpest frosts, and the rich soil making the trees grow too late in autumn, without ripening and hardening their wood.—*Gen. Farmer.*

FOR FATHER'S HONOR.

BY T. S. ARTHUR.

"So much gone! I might have known how it would be!" said, Mr. Sterling looking up from the morning paper, with a most unpleasant expression on his face.

"What is gone?" asked his wife.

"My money is gone," answered Mr. Sterling fretfully.

"What money?"

"That money I was foolish enough to lend Mr. Granger."

"Why do you say that?"

"He's dead," replied Mr Sterling, coldly.

"Dead!" The wife's voice was full of surprise and pain. Sorrow overshadowed her face.

"Yes, gone, and my money with him. Here's a notice of his death. I was sure when I saw him go away that he'd never come back except in his coffin. Why will doctors send their patients from home to die?"

"Poor Mrs. Granger! Poor little orphans!" sighed Mrs. Sterling. "What will they do?"

"As well without him as with him," was the unfeeling answer of her husband, who was only thinking of the three hundred dollars he had been over persuaded to loan the sick clergyman, in order that he might go South during the winter. "He's been more of a burden than a support to them these two years."

"Oh, Harvey! How can you speak so?" remonstrated Mrs. Sterling. "A kinder man in his family was never seen. Poor Mrs. Granger! She will be heart-broken."

"Kindness is cheap and easily dispensed," coldly replied Mr. Sterling. "He would have been of more use to his family if he had fed and clothed them better. I reckon they can do without him. If I had my three hundred dollars, I wouldn't—"

But he checked for shame—not for any better feeling—the almost brutal words his heart sent up to his tongue.

Not many hundred yards away from Mr. Sterling's handsome residence stood a small, plain cottage, with a garden in front neatly laid out in box-bordered walks, and filled with shrubbery. A honey-suckle, twined with a running rose-bush, covered the latticed portico, and looked in at the chamber windows giving beauty and sweetness. The hand of taste was seen everywhere—not lavish, but discriminate taste. Two years before there was not a happier home than this in all the pleasant town of C——. Now the shadow of death was upon it.

Poor Mrs. Granger! Poor little orphans! Well might Mrs. Sterling pity them. While her mer-

cenary husband was sighing over the loss of three hundred dollars, the young widow lay senseless with her two little ones weeping over her in childish terror. The news of death found her unprepared. Only a week before she had received a letter from Mr. Granger, in which he talked hopefully of his recovery. "I am stronger" he said. "I have gained five pounds in flesh since I left home." Three days after writing this letter there came a sudden change of temperature; he took cold, which was followed by congestion of the lungs; and no medical skill was sufficient for the case. His body was not sent home for interment. When the husband and father went away two or three months before his loved ones looked upon his face for the last time in this world.

Love and honor make the heart strong. Mrs. Granger was a gentle, retiring woman. She had leaned upon her husband very heavily; she had clung to him as a vine. Those who knew her best felt most anxious about her. "She has no mental stamina." they said. "She can not stand alone."

But they were mistaken. As we have just said, love and honor make the heart strong. Only a week after Mr. Sterling read the news of the young ministers death he received a note from the widow.

"My husband," she said, "was able to go South in hope of regaining his health through your kindness. If he had lived, the money you loaned him would have been faithfully returned, for he was a man of honor. Dying, he left that honor in my keeping, and I will see that the debt is paid. But you will have to be a little patient with me."

"All very fine," muttered Mr. Sterling, with a slightly curling lip. "I've heard of such things before. They sound well. People will say of Mrs. Granger, 'What a noble woman! What a fine sense of honor see has!' But I shall never see the three hundred dollars I was foolish enough to lend her husband."

Very much to Sterling's surprise and not a little to his pleasure, he discovered about three months afterwards, he was mistaken in his estimate of Mrs. Granger. The pale, sad, fragile, little woman brought him the sum of twenty-five dollars. He did not see the tears in her eyes as he displayed her husband's note, with his dear familiar writing and made thereon with considerable formality, an indorsement of the sum paid. She would have given many drops of her heart's blood to have been able to clutch that document from Mr. Sterling's hands. It seemed like a blot on the dear lost one's memory.

"Katie Granger is the queerest little girl I ever knew," said Flora Temple to her mother, on the evening of the very day on which this first payment was made. Mr. Sterling heard the remark, and letting his eyes drop from the newspaper he was reading, turned his ears to listen.

"I think her a very nice little girl," replied the mother.

"So she is nice," returned the child; "but then she is so queer."

"What do you mean by queer?"

"Oh, she isn't like the rest of us girls. She said the oddest thing to day. I almost laughed out; but I'm glad I didn't. Three of us, Katie, Lillie Bonfield, and I, were walking round the square at recess time, when Uncle Hiram came along, and taking out three bright ten cent pieces, he said, 'Here's a dime for each of you, girls, to buy sugar plums.' Lillie and I screamed out, and starting away for the candy shops in an instant; but Katie stood still with her share of the money in her hand. 'Come along!' I cried. She didn't move, but looked strange and serious. 'Arn't you going to buy candy with it?' I asked. Then she shook her head gravely and put the dime in her pocket, saying (I don't think she meant me to hear the words)—'It's for father's honor'; and leaving us, went back to the schoolroom. What did she mean by that, mother? Oh, she is so strange?

"Her mother is very poor, you know," replied Mrs. Sterling, laying up Katie's singular remark to be pondered over.

"She must be," said Flora, "For Katie's worn the same frock to school every day for 'most three months."

Mr. Sterling, who did not let a single word of this conversation escape him, was far from feeling as comfortable under the prospect of getting back the money he had loaned Mr. Granger, as he had felt an hour before. He understood the meaning of Katie's remark. 'It's for father's honor;' the truth flashing at once through his mind.

There was another period of three months and then Mrs. Granger called again on Mr. Sterling, and gave him twenty-five dollars more. The pale, thin face made a stronger impression on him. It troubled him to lift the money her small fingers, in which the blue veins shone through the transparent skin, had counted out. He wished that she had sent the money instead of calling. It was on his lips to remark, "Do not trouble or pinch yourself to pay faster than is convenient, Mrs. Granger," but cupidity whispered that she might take advantage of his considerate kindness, and so he kept silent.

"No dear it's for father's honor; I cant spend it."

Mr. Sterling was passing a fruit shop, where two children were looking in at the window, when this sentence struck upon his ears.

"An apple won't cost but a penny, Katie; and I want one so badly," answered the younger of the two children, a little girl no five years of age.

"Come away, Maggie," said the other, drawing her sister back from the window, "Don't look at them any more—don't think about them."

"But I can't help thinking about them, sister Katie," pleaded the child.

It was more than Mr. Sterling could stand. Every want of his own children was supplied. He bought fruit by the barrel. And here was a little child pleading for an apple, which cost only a cent! but the apple was denied, because the penny must be saved to make good the dead father's honor.—Who held that honor in pledge? Who took the sum total of these pennies, saved in the self-denial of little children and added them to his already briming coffers? A feeling of shame burned the cheeks of Mr. Sterling.

"Here, little ones!" he called, as the two children went slowly away from the fruit shop window. He was touched with the sober look on their sweet young faces as he turned at his invitation.

"Come in, and I'll get you some apples," he said.

Katie held back, but Maggie drew on her hand, eager to accept the offer, for she was longing for the fruit.

"Come!" repeated Mr. Sterling, speaking very kindly.

The children then followed him into the shop, and he filled their aprons with apples and oranges.—Their thankful eyes and happy faces were in his memory all day. This was his reward, and it was sweet.

Three months more, and again Mr. Sterling had a visit from the pale young widow. This time she had only twenty dollars. It was all she had been able to save, she said; but she made no excuse, and uttered no complaint. Mr. Sterling took the money aud counted it over in a hesitating way. The toucht hereof was pleasant to his fingers for he loved money. But the vision of sober child faces was before his eyes, and the sound of pleading child voices in his ears.

Through over-taxing toil, and the denial of herself and little ones, the poor widow had gathered this small sum, and was now paying it into his hands—to make good the honorable contract of her dead husband. He hesitated, ruffling in a half-absent way the edges of a little pile of bills that lay under his fingers. One thing was clear to him: he would never take anything more from the widow. The balance of the debt must be forgiven. People would get to understand the widow's case; they would hear of her self-denial and that of her childrin in order to pay the husband's and father's debt, in order to keep pure his honor; and they would ask naturally, who was the exacting creditor? This thought affected him unpleasantly.

Slowly, as one in whose mind debate still went on, Mr. Sterling took from his desk a large pocket-book, and selected from one of the compartments a note on which Mrs. Granger had now made three payments. For some moments he held it in his hands, looking at the face thereof. He saw written down in clear figures, the sum of $300. Seventy of this had been paid. If he gave up or destroyed the the slip of paper, he would lose two hundred and thirty dollars. It was something of a trial for one who loved money so well, to come up squarely to this issue. Something fell in between his eyes and the nots of hand. He did not see the writing and figures of the obligation, but a sad pleading little face, and with the vision of this face came to his ears the sentence: "No, dear, it's for father's honor."

The debate in Mr. Sterling's mind was over.—Taking up a pen he wrote across the face of Mr. Granger's note the word "Cancelled," and handed it to the widow.

"What does this mean?" she asked, looking bewildered.

"It means," said Mr. Sterling, "that I hold no obligations against your husband."

Some moments went by ere Mrs. Granger's thoughts became clear enough to comprehend it all. Then she replied as she reached back the note:

"I thank you for your generous kindness, but he left his honor in my keeping and I must maintain it spotless."

"That you have already done," answered Mr. Sterling, speaking through emotions that were new to him. "It is as white as snow."

Then he thrust back upon her the twenty dollars she had just paid him.

"No, Mr. Sterling," the widow said.

"It shall be as I will!" was the response. "I would rather touch fire than your money. Every dollar would burn upon my conscience like living coals."

"But keep the last payment," urged the widow "I shall feel better."

"No, Madame! Would you throw fire upon my conscience? Your husband's honor never had a stain. All men knew him to be pure and upright. When God took him, He assumed his earthly debts, and did not leave upon you the heavy burden of their payment. But he left upon you another and most sacred obligation, which you have overlooked in part."

"What?" asked the widow, in an almost startled voice.

"To minister to the wants of your children; whom you have pinched and denied in their tender years—giving their meat to cancel an obligation which death had paid. And you have made me a party in the wrong to them. Ah, Madam!" Mr. Sterling's voice softened very much, "if we could

all see right at the right time, and do right at the right time, how much of wrong and suffering might be saved! I honor your true hearted self-devotion; but I shall be no party to its continuance, As it is, I am your debtor in the sum of fifty dollars, and will repay it in my own way and time."

Under Providence, this circumstance was the means of breaking through the hard crust of selfishness and cupidity which had formed around his heart. He was not only generous to the widow in after years, but a doer of many deeds of kindness and humanity to which he had been in other times a stranger.

The Household.

KILLING FOWLS FOR TABLE USE.

A Late number of the London Poultry Chronicle has an article on this subject, from which we extract the following:

"If the fowls are to be eaten on Thursday let them be caught on Monday evening, and then shut up in a basket, absolutely without food or water, until the next morning. Being quite empty, they must be killed, not by cutting the throat, but by breaking their necks. Take hold of the tips of the ends, or flight-feather of the wings, and the lower part of the thighs and knees with the left hand.—Take hold of the head of the fowl in the right hand, turn it (the head) upward in the hand, but simultaneously pull up with the left hand and press down with the right. Izaak Walton said, "Impale the frog as if you loved him," and Talleyrand said, "No zeal in anything—it is always getting into trouble." No zeal, no strength, and very little effort is required. Press downward with the right hand until there is a trifling jerk—it is the dislocation of the neck. Death ensues in a few minutes. If there is any doubt, it can be easily solved by feeling the back of the bird's head—there will be found an "ugly gap between the head and neck." When a fowl is bled to death, it is very white, but is often dry; when it is killed by dislocation of the neck it is juicy. As soon as the bird is dead—indeed, I should say, *directly* it is dead—it should be picked. The large feathers, the wings and tail, should be pulled first. The reason why they should be picked is that the fowl then gets cold; it is for the same cause essential that they should be killed early in the morning, or in the evening; the latter is preferable. Even in hot weather the fowl is spoiled five times out of ten by the fermentation of the food, or the decomposition of the water that was in the body at the time of death. The bird fasted and killed as we have described, may be drawn and trussed for the spit some hours before it is wanted, and, spite of the hot weather, it will be sweet, tender and juicy.

Important Facts.—Set a pitcher of iced water in a room inhabited, and in a few hours it will have absorbed from the room, the air, which will have become purer, but the water utterly filthy. This depends on the fact that water has the faculty of condensing and thereby absorbing nearly all the gases, which it does without increasing its own bulk. The colder the water is, the greater its capacity to contain the gases. At ordinary temperature a pint of water will contain a pint of carbonic acid gas, and several pints of ammonia. Hence, water kept in the room awhile, is always unfit for use, and should be often removed, whether it has become warm or not. For the same reason, the water in a pump should all be pumped in the morning before any is used. That which has stood over night is not fit for coffee water in the morning. Impure water is more injurious to health than impure air, and every person should provide the means for obtaining fresh pure water for all domestic use.

Fun at Home.—Don't be afraid of a little fun at home, good people! Don't shut up your houses, lest the sun should fade your carpets; and your hearts, lest a hearty laugh should take down some of the musty cobwebs there! If you want to ruin your sons, let them all think that all mirth and social enjoyment must be left on the threshold when they come home at night. When a home is regarded as only as a place to eat, drink, and sleep in, the work is begun that ends in gambling houses and reckless degradation. Young people must have fun and relaxation somewhere. If they do not have it at their own hearth stones, it will be sought in other and less profitable places. Therefore, let the fire burn brightly at night, and make the home ever delightful with those little arts that parents so perfectly understand. Don't repress the buoyant spirit of your children; half an hour of merriment round the lamp and fire-light of home blots out the remembrance of many a care and annoyance during the day.

To Clean Tea-Trays.—Do not pour boiling water over them, particularly Japanned ones, as it will make the varnish crack and peal off, but have a sponge wetted with warm water and a little soap, if the tray be very dirty; then rub it with a cloth; if it looks smeary, dust on a little flour, then rub it with a dry cloth. If the paper tray gets marked, take a piece of woolen cloth, with a little sweet oil, and rub it over the marks; if anything will take them out, this will. Let the urn be emptied, and the top wiped dry, particularly the outside, for if any wet be suffered to dry on it, it will leave a mark.

Keep coffee by itself, as the odor affects other articles. Keep tea in a close chest or canister.

The Dairy.

Quantity of Cheese per Gallon of Milk.

In family cheese-making there is considerable difference in the quantity of cheese produced by different persons from a given quantity of milk. A skilful manufacturer should, during the season, average a pound of pressed curd from a gallon of milk, *wine* measure, or a pound of *cured cheese* from a gallon of milk, *beer* measure. When at the Rome factories in June, 1862, I was told that 600 cows were then producing daily about 1,450 *wine gallons* of milk, which turned off 1,250 pounds of pressed curd. The curd at this factory was divided up and pressed into eight cheeses. At an other factory, where the milk of some 400 cows was used, the produce was 965 gallons, beer measure, making 1,120 pounds of pressed curd, or about 115 pounds of curd to 100 gallons of milk, though I was told the quantity of curd varied from day to day, some days being several pounds less than in the proportion above stated. At this factory the curd was divided up into four cheeses of about 280 pounds each. The shrinkage on the cheese while curing, in the first factory mentioned, would average, it was said, about five per cent. Milk, of course, varies in quality at different seasons of the year. In the fall, as the quantity decreases, it is richer, and some cheese manufacturers deem its condition too thick to be worked with the best advantage into cheese; they therefore thin it down by adding water at the rate of one gallon of water to ten gallons of milk. This dilution it is claimed, produces a better curd with less liability of losing butyraceous particles in working, etc.—*X. A. Willard, in Trans. of N. Y. S. Ag. Society.*

Deep or Shallow Pans for Cream.

We find in the "Homestead" an experiment by a farmer's wife, to ascertain what depth of pan yielded the most cream. Farmers probably lose largely in this way without knowing it.

In pans containing	1 quart,	the cream	measured	1 gill.
"	"	2 "	"	"	2 gills.
"	"	3 "	"	"	2½ "
"	"	4 "	"	"	3 "
"	"	5 "	"	"	3¾ "

The experiments were tried twice with the same result, and her conclusion was that shallow pans yielded the greatest proportionate quantity of cream, and that two quarts is enough for any one pan, also, that the milk should be strained immediately after milking. This seems reasonable, as we know in covered pans, cream does not rise well. There must be exposure to the atmosphere, and the more surface the better.—*Rural Advertiser.*

TREATMENT OF COWS.

Cows should be driven from pasture as leisurely as they will walk; never harrassed or irritated by man, boy or dog, because fast driving or harsh treatment of any kind injures the quality and lessens the quantity of milk. The milk of cows in heat is unfit both for human food and for dairy use.

Milking should be at regular intervals, say at five o'clock in the morning and at five o'clock in the afternoon. Those milked first in the morning to be milked first at night.

When cows are in the barn, treat them gently in every respect. Let them understand that they are approached only with friendly intentions. Loud and harsh language, or anything that would excite the animal or cause fear, is decidedly injurious.

Filth may add value to the dung heap, *but it spoils milk.* Let the udder and teats be *thoroughly cleansed* —washed, if necessary—and, beginning slowly, let the milking soon be as rapid as consists with gentleness. To draw milk gently, quickly and completely, is the highest accomplishment in a milker. The strippings are from five to fifteen times richer than the milk first drawn. No one can afford to lose this; and, besides, leaving any in the udder tends to diminish secretion. Poor milkers dry up cows.

No talking should be allowed while milking is going on. Besides irritating the cow by noise, the milker, every now and then, suspends his labor to listen and reply to conversation, and hence the work is imperfectly performed and the loss is very considerable.—*S. F. Perley's Rules.*

The Royal Dairy House.

Charles S. Flint, Secretary of the Massachusetts State Board of Agriculture, describes the dairy-house erected by Queen Victoria's late husband:

"The milk-room is thirty-six by twenty, and twenty feet high, the roof resting upon pillars. The shelves all around are marble, and the tables in the middle 'all marble.' The pans and dishes are all porcelain, china or glass. The floor, the walls, the ceilings, are all porcelain, the floor and roof in the form of tiles, the latter having openings for ventilation. The porcelain on the walls is white. In the cornicing and other ornamental parts it is embossed and colored. The whole is perfect in form, coloring and lustre. The pans were full of the richest milk, covered with the yellowest coating of cream. The obliging maid gave us as much as we could drink. Around the walls, beautifully painted upon china, were likenesses of all the royal family, the children represented in the midst of the quiet, beautiful scenes of country life. The name of each was placed beneath."

BRAHMA POOTRA FOWLS.

The Brahma Pootra is believed by many to be the best, for all purposes, of any of the large Asiatic breeds. They are thus named Brahma Pootra from a river in India named Burrampooter, from whose banks these fowls are said to be imported.—They are of a white color, inclined sometimes to cream color on the back, neck hackles slightly streaked with black, the tail black, and in the cock glossy green plume feathers. Legs yellowish, usually feathered; combs single, or oftimes pea comb. They weigh, at maturity, from fifteen to twenty lbs. the pair. They are good layers.

Accidents producing fracture, bruises, ulcers, loss of feathers, &c., may, in most cases, be left to nature.—When bones are broken, in most cases the chicken had better be consigned to the cook. In other cases of accident the good sense of the owner will generally dictate the remedy.

The Poultry House.

SOMETHING ABOUT POULTRY.

BY C. N. BEMENT.

Poultry has ceased to be a mania, so far as regards foolish and extravagant prices, but it remains to the wealthy a delightful occupation; to those in easy circumstances a recreation; and to the poor a valuable auxiliary. Whatever may be the result, it is unquestionable that the demand for poultry and eggs will continue, war or no war. Immense numbers of fowls are being disposed of daily, and although the supply may be greatly increased, it is unequal to the demand. For good poultry there is always a sale, and where there has not been they will supply one. They very fact that they are to be had of a good quality will cause a demand for them. In most cities there is always a demand for them. Early chickens, those hatched in March or forepart of April, taken to market in June or July, will generally command from seventy-five to eighty cents per pair, and according to the present prices of meats, should at least bring one dollar per pair, a better price according to the cost of production, than at any other age.

Looking at the fowl merely as a machine for the conversion of cheap materials into a costly article of animal food, the point to be considered by those who have this object in view, and would be guided by motives of economy in their selection, it is not which machine will consume the least of the raw material, but which will manufacture the article most expeditiously, and give the quickest return of serviceable food. Here it will not perhaps be questioned that the Brahma and Dorking possess this property in an eminent degree, and next to them the larger sized Dominiques. The question naturally arises, "Which is the most profitable breed to keep?" The answer must be, that which possesses those properties most valued for eggs and food.

When every article of food has to be purchased, and no range can be permitted beyond limited yards and enclosures, there must be sales at high prices, and moreover, great skill to remunerate the outlay; but whenever poultry has been kept as a regular item in the economy of a farm-yard, or even a laborer's cottage, we fully believe, and we speak without prejudice, as we are not the owner of either the Brahma, Dorking or Dominique, properly managed, will justify our present opinion of their merits as early layers, as well as for the quality of their flesh. They fatten quickly, particularly the two former, and, if well fed, need no cooping for the table; they are extremely hardy, and much tamer and less inclined to roam about than most any other kind.

In spite of their high price—in spite of the prejudice which exist, with some, against the larger fowls for the table, and the quantity of corn they are accused of consuming, we do most assuredly believe the Brahmas, Dorkings and Dominiques to be the best fowls for the farmer and poor man, considering them not as *fancy*, but only productive stock.

We recollect very well, some years ago it was said, and believed by some, that when canals and railways were completed, horses and oats would be unsaleable—not worth the rearing. How far that has proved true may be known from the fact of the present scarcity and high prices of both horses and oats, aside from the demand for the army, and it will be so with poultry. We are entirely without statistical returns on the subject, but if they were collected, people would be astonished at the consumption of both poultry and eggs.—*Rural Advertiser.*

REARING TURKEYS.

The usual mode of raising turkeys in this country is to be breed from large and fully mature birds, two years old and upwards. Old hens are preferable to young ones, their eggs invariably producing larger and stronger progeny. The parent hen is not allowed to leave her nest immediately after hatching or to feed her young ones, but is confined until the next day, when she is set at liberty. The young ones are not permitted to run about with the mother until they can fly a little, when they may range with her and procure such insect food as may be in season. During the first week after hatching, hard boiled eggs, chopped into small pieces, and a few angle worms, are appropriate food. As they grow older, curds, coarsely ground corn meal, wet with sour milk and mixed with sand to prevent cropbake, as it is called, are given them. In stormy weather the young turkeys should be confined in a warm situation, but not too close to the fire. The heat will soon revive them, and after partaking of a little food they will be as lively as ever. Buckwheat is an excellent grain for fattening turkeys, and should be sown among the corn expressly for that purpose.

Hygiene.

Expanding the Lungs.—Step out into the purest air you can find; stand perfectly erect, with the head and shoulders back, and then fixing the lips as though you were going to whistle, draw the air through the nostrils into the lungs. When the chest is about full, raise the arms, keeping them extended, with the palms of the hand down, as you suck in the air, so as to bring them over the head, just as the lungs are quite full. Then drop the thumbs inward, and after gently forcing the arms backward, and the chest open, reverse the process by which you draw your breath, till the lungs are entirely empty. This process should be repeated three or four times during the day. It is impossible to describe to one who has never tried it, the glorious sense of vigor which follows the exercise. It is the best expectorant in the world. We know a gentleman, the measure of whose chest has been increased some three inches during as many months.

Morning Air.—The Medical Journal says it is a common and favorite notion with many people that the morning air is the purest—most bracing—but the opposite is the fact. The air is full of dampness, fog, and miasm, at about sunrise, which the sun however, soon dissipates. Before engaging in anything like exercise or work in the early morning out of doors, it is conducive to health to take a warm cup of coffee, if breakfast is not to be had.

To Remove Pain.—Dr. Hall says, neuralgia of severest character is sometimes removed by painting the parts two or three times a day with a mixture composed of half an ounce of the tincture of iodine and half a drachm of the sulphate of morphine.

One of the most powerful liniments for the relief of severe pain, is made of equal quantities of spirits of hartshorn, sweet oil and chloroform; dip into this a piece of cotton cloth doubled, about the size of a silver dollar, lay it on the spot, hold a handkerchief over the spot, so as to confine the fumes, and the pain immediately disappears. Do not let it remain on over a minute. Shake it well just before using, and keep the bottle very closely stopped.

Over-Eating.—Dr. Hall says: As soon as you are sensible that you have eaten too much, take a walk, gradually increasing its rapidity until there is a free perspiration, and continue at this gait until every feeling of discomfort about the stomach or lungs has disappeared, then cool off very slowly in a closed room, and eat not an atom until the second meal thereafter, thus omitting one.

Troubles are like babies, that only grow bigger by nursing.